



SAMSUNG

# User Manual

## CL80

This user manual includes detailed usage instructions for your camera. Please read this manual thoroughly.

 [Click a topic](#)

Common questions

Quick reference

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Basic functions

Extended functions

Shooting options

Playback/Editing

Wireless network/Bluetooth

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# Health and safety information

Always comply with the following precautions and usage tips to avoid dangerous situations and ensure peak performance of your camera.



**Warning**—situations that could cause injury to yourself or others



**Caution**—situations that could cause damage to your camera or other equipment



**Note**—notes, usage tips, or additional information



## Safety warnings

### Do not use your camera near flammable or explosive gases and liquids

Do not use your camera near fuels, combustibles, or flammable chemicals. Do not store or carry flammable liquids, gases, or explosive materials in the same compartment as the camera or its accessories.

### Keep your camera away from small children and pets

Keep your camera and all accessories out of the reach of small children and animals. Small parts may cause choking or serious injury if swallowed. Moving parts and accessories may present physical dangers as well.

### Prevent damage to subjects' eyesight

Do not use the flash in close proximity (closer than 1 m/3 ft) to people or animals. Using the flash too close to your subject's eyes can cause temporary or permanent damage.

### Handle and dispose of batteries and chargers with care

- Use only Samsung-approved batteries and chargers. Incompatible batteries and chargers can cause serious injuries or damage to your camera.
- Never dispose of batteries in a fire. Follow all local regulations when disposing of used batteries.
- Never place batteries or cameras on or in heating devices, such as microwave ovens, stoves, or radiators. Batteries may explode when overheated.
- Do not use a damaged power supply cord, plug, or loose outlet when charging batteries. This may cause a fire or electric shock.

### Avoid interference with pacemakers

Maintain a minimum of 15 cm (6 inches) between cameras and pacemakers to avoid potential interference, as recommended by manufacturers and the independent research group, Wireless Technology Research. If you have any reason to suspect that your camera is interfering with a pacemaker or other medical device, turn off the camera immediately and contact the manufacturer of the pacemaker or medical device for guidance.



CAUTION

### Safety precautions

#### Handle and store your camera carefully and sensibly

- Do not allow your camera to get wet—liquids can cause serious damage. Do not handle your camera with wet hands. Water damage to your camera can void your manufacturer's warranty.
- Do not expose the camera to direct sunlight or high temperatures for an extended period of time. Prolonged exposure to sunlight or extreme temperatures can cause permanent damage to your camera's internal components.
- Avoid using or storing your camera in dusty, dirty, humid, or poorly-ventilated areas to prevent damage to moving parts and internal components.
- Remove the batteries from your camera when storing it for an extended period of time. Installed batteries may leak or corrode over time and cause serious damage to your camera.
- Protect your camera from sand and dirt when using it on beaches or in other similar areas.
- Protect your camera and monitor from impact, rough handling, and excessive vibration to avoid serious damage.
- Exercise caution when connecting cables or adapters and installing batteries and memory cards. Forcing the connectors, improperly connecting cables, or improperly installing batteries and memory cards can damage ports, connectors, and accessories.

- Do not insert foreign objects into any of your camera's compartments, slots, or access points. Damage due to improper use may not be covered by your warranty.
- Do not swing your camera by the strap. This may cause injury to yourself or others.
- Do not paint your camera, as paint can clog moving parts and prevent proper operation.
- Paint or metal on the outside of the camera may cause allergies, itchy skin, eczema, or swelling for people with sensitive skin. If you have experience any of these symptoms, stop using the camera immediately and consult a doctor.

#### Protect batteries, chargers, and memory cards from damage

- Avoid exposing batteries or memory cards to very cold or very hot temperatures (below 0° C/32° F or above 40° C/104° F). Extreme temperatures can reduce the charging capacity of your batteries and can cause memory cards to malfunction.
- Prevent batteries from making contact with metal objects, as this can create a connection between the + and – terminals of your battery and lead to temporary or permanent battery damage. Also, this may cause a fire or electric shock.
- Prevent memory cards from making contact with liquids, dirt, or foreign substances. If dirty, wipe the memory card clean with a soft cloth before inserting in your camera.
- Do not allow liquids, dirt, or foreign substances to come in contact with the memory card slot. Doing so may cause the camera to malfunction.

- Turn off the camera when inserting or removing the memory card.
- Do not bend, drop, or subject memory cards to heavy impact or pressure.
- Do not use memory cards that have been formatted by other cameras or by a computer. Reformat the memory card with your camera.
- Never use a damaged charger, battery, or memory card.

### Use only Samsung-approved accessories

Using incompatible accessories may damage your camera, cause injury, or void your warranty.

### Protect your camera's lens

- Do not expose the lens to direct sunlight, as this may discolor the image sensor or cause it to malfunction.
- Protect your lens from fingerprints and scratches. Clean your lens with a soft, clean, debris-free lens cloth.

### Follow all safety warnings and regulations

Comply with any regulations that restrict the use of a camera in a certain area.

### Turn off the camera near medical equipment

Your camera can interfere with medical equipment in hospitals or health care facilities. Follow all regulations, posted warnings, and directions from medical personnel.

### Turn off the camera when in an aircraft

Your camera can cause interference with aircraft equipment. Follow all airline regulations and turn off your camera when directed by airline personnel.

### Avoid interference with other electronic devices

Your camera emits radio frequency (RF) signals that may interfere with unshielded or improperly shielded electronic equipment, such as pacemakers, hearing aids, medical devices, and other electronic devices in homes or vehicles. Consult the manufacturers of your electronic devices to solve any interference problems you experience.





## Important usage information

### Allow only qualified personnel to service your camera

Do not allow unqualified personnel to service the camera or attempt to service the camera yourself. Any damage that results from unqualified service is not covered by your warranty.

### Ensure maximum battery and charger life

- Overcharging batteries may shorten battery life. After charging is finished, disconnect the cable from your camera.
- Over time, unused batteries will discharge and must be recharged before use.
- Disconnect chargers from power sources when not in use.
- Use batteries only for their intended purpose.

### Exercise caution when using the camera in humid environments

When transferring the camera from a cold environment to a warm and humid one, condensation can form on the delicate electronic circuitry and memory card. In this situation, wait for at least 1 hour until all moisture has evaporated before using the camera.

### Check that the camera is operating properly before use

The manufacturer takes no responsibility for any loss of files or damage that may result from camera malfunction or improper use.

### Use your camera in the normal position

Avoid contact with your camera's internal antenna.

- Data transferred via WLAN or Bluetooth technology could be leaked, so avoid transferring sensitive data in public areas or on open networks.
- The camera manufacturer is not liable for any data transfers that infringe on copyrights, trademarks, intellectual property laws, or public decency ordinances.

## Copyright information

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- Wi-Fi®, the Wi-Fi CERTIFIED logo, and the Wi-Fi logo are registered trademarks of the Wi-Fi Alliance.

- Camera specifications or contents of this manual may be changed without prior notice due to upgrade of camera functions.
- We recommend using your camera within a country where you purchase it.
- For Open Source License information, refer to the "OpenSourceInfo.pdf" in the provided CD-ROM.

## Organization of the user manual

### Basic functions 13

Learn about your camera's layout, icons, and basic functions for shooting.

### Extended functions 32

Learn how to take a photo by selecting a mode and how to record a video or voice memo.

### Shooting options 42

Learn about the options you can set in Shooting mode.

### Playback/Editing 66

Learn how to play back photos, videos, or voice memos and edit photos or videos. Also, learn how to connect your camera to your photo printer, TV, or HDTV.








### Wireless network/Bluetooth 94

Learn to use several functions using wireless local area networks (WLANs) and the Bluetooth feature.

### Appendixes 111

Refer to settings, error messages, specifications, and maintenance tips.

## Indications used in this manual


Shooting mode	Indication
Smart Auto	
Auto	
Program	
Scene	
DUAL IS	
Smart Scene Detection	
Movie	

### Shooting mode icons



These icons indicate that a function is available in the corresponding modes. The  mode may not support functions for all scenes.

e.g.)

Adjusting the exposure manually (EV)



Depending on the intensity of the ambient light, your photos may be too bright or dark. In these cases, you can adjust the exposure to get a better photo.







Darker (-)

Neutral (0)

Brighter (+)

Available in the Program, DUAL IS, Movie, and Smart Scene Detection modes

## Icons used in this manual

Icon	Function
	Additional information
	Safety warnings and precautions
[ ]	Camera buttons; for example: <b>[Shutter]</b> (represents the shutter button)
( )	Page number of related information
→	The order of options or menus you must select to perform a step; for example: Select  →  (represents Select  , and then  )
*	Annotation

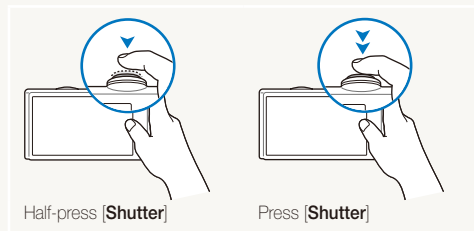
## Abbreviations used in this manual

Abbreviation	Definition
ACB	Auto Contrast Balance
AEB	Auto Exposure Bracket
AF	Auto Focus
AP	Access Point
DIS	Digital Image Stabilization
DLNA	Digital Living Network Alliance
DPOF	Digital Print Order Format
EV	Exposure Value
OIS	Optical Image Stabilization
WB	White Balance

## Expressions used in this manual

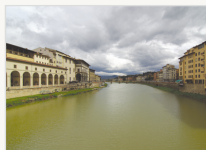
### Pressing the shutter

- Half-press [**Shutter**]: press the shutter halfway down
- Press [**Shutter**]: press the shutter all the way down

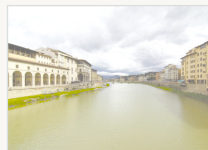


### Exposure (Brightness)

The amount of light that enters your camera determines the exposure. You can alter the exposure with shutter speed, aperture value, and ISO speed. By altering the exposure, your photos will be darker or lighter.



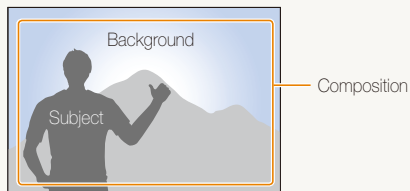
Normal exposure



Overexposure (too bright)
















### Subject, background, and composition

- **Subject**: the main object of a scene, such as a person, animal, or still life
- **Background**: the objects around the subject
- **Composition**: the combination of a subject and background



# Common questions


You can get answers to common questions. Solve problems easily by setting shooting options.

	<b>The subject's eyes appear red.</b>	<p>This is caused by a reflection from the camera flash.</p> <ul style="list-style-type: none"><li>• Set the flash option to  <b>Red-eye</b> or  <b>Red-eye Fix</b>. (p. 47)</li><li>• If the photo has already been taken, select  <b>Red-eye Fix</b> in the edit menu. (p. 82)</li></ul>
	<b>Photos have dust spots.</b>	<p>Dust particles floating in the air may be captured in photos when using the flash.</p> <ul style="list-style-type: none"><li>• Turn off the flash or avoid taking photos in a dusty place.</li><li>• Set ISO speed options. (p. 48)</li></ul>
	<b>Photos are blurred.</b>	<p>This may be caused by taking photos in low light conditions or holding the camera incorrectly.</p> <ul style="list-style-type: none"><li>• Press <b>[Shutter]</b> halfway down to make sure the subject is focused. (p. 30)</li><li>• Use the  mode. (p. 37)</li></ul>
	<b>Photos are blurred when shooting at night.</b>	<p>As the camera tries to let in more light, the shutter speed slows. This can make it difficult to steady the camera and may result in camera shake.</p> <ul style="list-style-type: none"><li>• Select  <b>Night</b> in the  mode. (p. 36)</li><li>• Turn on the flash. (p. 47)</li><li>• Set ISO speed options. (p. 48)</li><li>• Use a tripod to prevent your camera from shaking.</li></ul>
	<b>Subjects come out too dark because of backlighting.</b>	<p>When the light source is behind the subject or when there is a high contrast between the light and dark areas, the subject may come out shaded.</p> <ul style="list-style-type: none"><li>• Avoid shooting in front of the sun.</li><li>• Select  <b>Backlight</b> in the  mode. (p. 34)</li><li>• Set the flash option to  <b>Fill in</b>. (p. 47)</li><li>• Adjust the exposure. (p. 57)</li><li>• Set the Auto Contrast Balance (<b>ACB</b>) option. (p. 58)</li><li>• Set the metering option to  <b>Spot</b> if a bright subject is in the center of the frame. (p. 59)</li></ul>

# Quick reference



## Taking photos of people

-  mode > Beauty Shot, Portrait, Children ▶ 34
- Red-eye, Red-eye Fix (to prevent or correct red-eye) ▶ 47
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## Taking photos at night or in the dark

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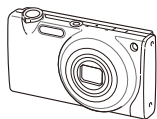
# Basic functions

Learn about your camera's layout, icons, and basic functions for shooting.

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# Unpacking

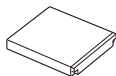
Check your product box for the following items.



Camera



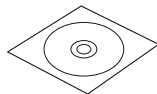
AC adapter/USB cable  
(AD44-00143A)/(AD39-00165A)



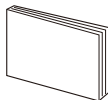
Rechargeable battery  
(4302-001226)



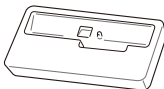
Strap  
(Silver: AD63-02596A/  
Black: AD63-02604A)



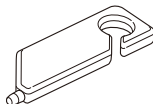
User Manual CD-ROM  
(AD46-00309A)



Quick Start Manual  
(AD68-04779A)



Cradle  
(AD97-18838A)



Touch pen  
(AD75-00070A)



The illustrations may differ from your actual items.

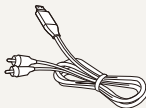
## Optional accessories



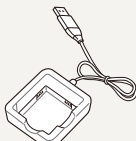
Camera case



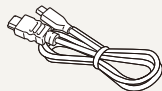
Memory card  
(microSD™)



AV cable  
(AD39-00146A)



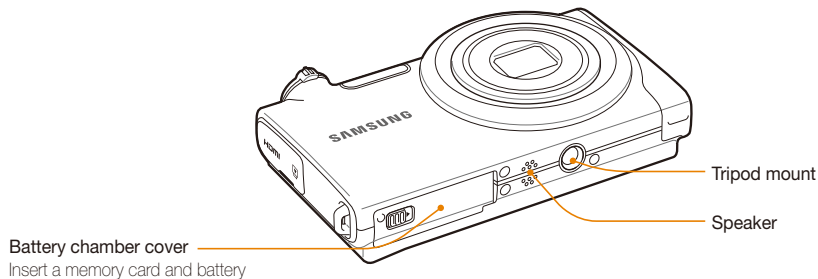
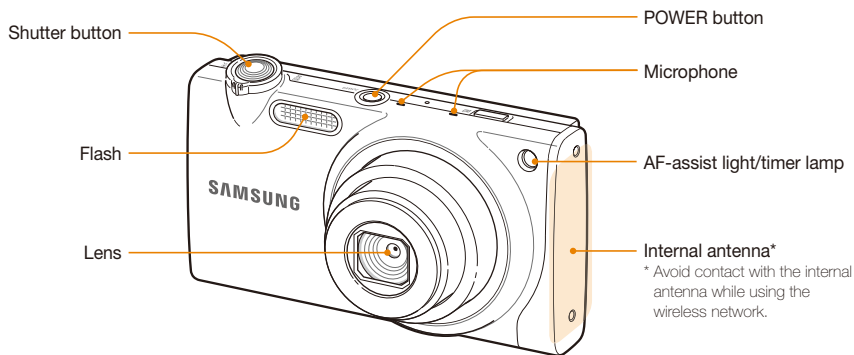
Battery charger  
(AD44-00164A)

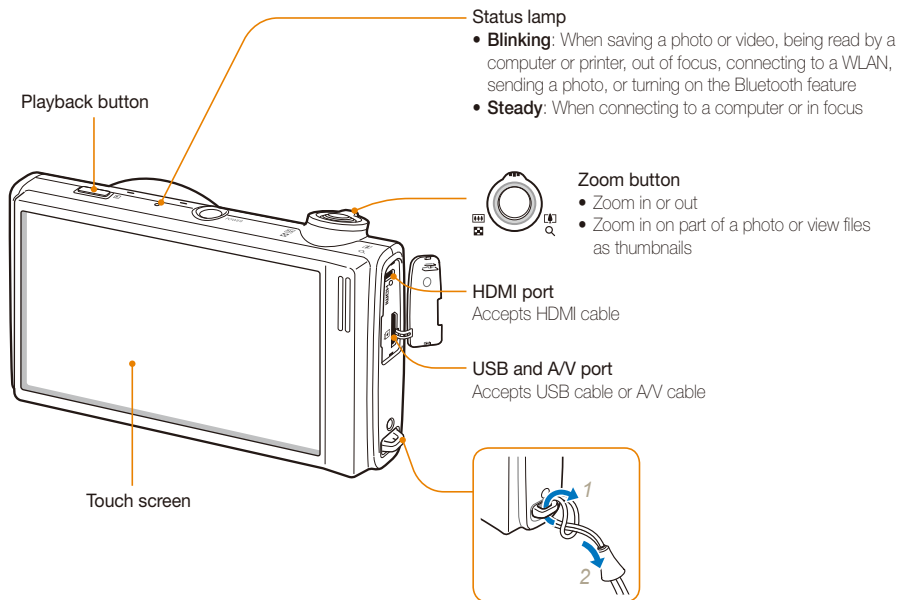


HDMI cable  
(AD39-00179A)

# Camera layout

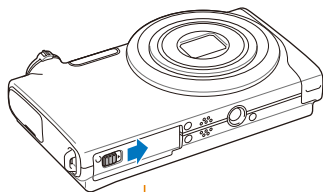
Before you start, familiarize yourself with your camera's parts and their functions.



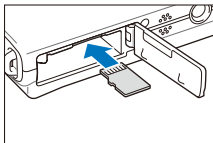


# Inserting the battery and memory card

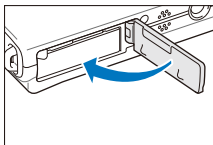
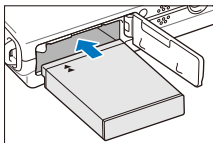
Learn to insert the battery and an optional microSD™ memory card into the camera.



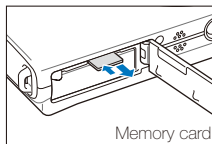
Insert a memory card with the gold-colored contacts facing up.



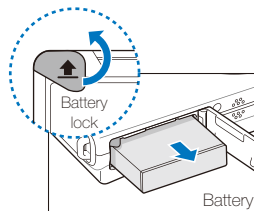
Insert the battery with the Samsung logo facing down.



## Removing the battery and memory card



Push gently until the card disengages from the camera and then pull it out of the slot.



Push the lock up to release the battery.

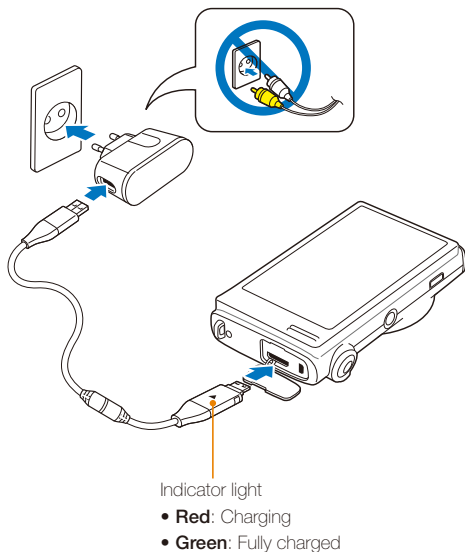


The internal memory can be used as a temporary storage device when the memory card is not inserted.

# Charging the battery and turning your camera on

## Charging the battery

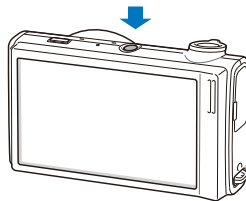
Before using the camera for the first time, you must charge the battery. Attach the USB cable to the AC adapter and then plug the end of cable with the indicator light into your camera.



## Turning on your camera

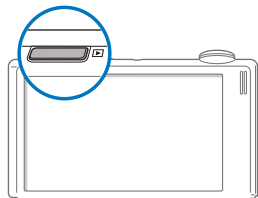
Press **[POWER]** to turn your camera on or off.

- The initial setup screen appears when you turn on the camera for the first time. (p. 19)



### Turning on your camera in Playback mode

Press **[Playback]**. The camera turns on and accesses Playback mode immediately.



When you turn on your camera by pressing and holding **[Playback]** for about 5 seconds, the camera does not emit any camera sounds.

# Performing the initial setup

The initial setup screen appears to allow you to configure the camera's basic settings.

## 1 Select **Language**.

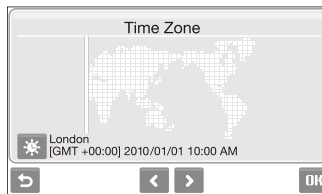


## 2 Select a language.

## 3 Select **Time Zone** (Time Zone).

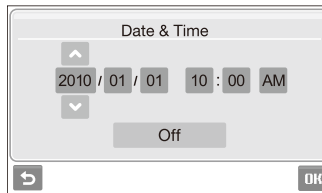
## 4 Select a time zone and select **OK**.

- To set the daylight-saving time, select .



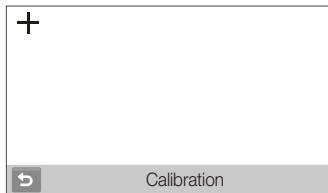
## 5 Select **Date & Time** (Date & Time).

## 6 Set the date and time, select a date format, and select **OK**.





- 7 Select **Calibration** (Calibration).
- 8 Tap the target on the screen with your touch pen.

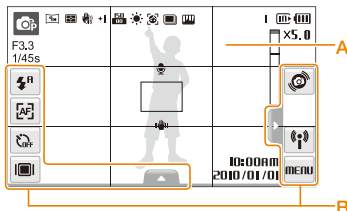


Tap directly in the center of the target for optimal performance.

- 9 Select **OK** to switch to the Shooting mode.

# Learning icons

The icons displayed will change according to the mode you select or the options you set.



## A. Status icons

Icon	Description
	Shooting mode
F3.3 1/45s	Aperture and shutter speed
	Photo resolution
	Video resolution
	Metering
	Optical Image Stabilization (OIS)
	Frame rate
	Exposure value
	ISO speed
	White balance
	Face detection
	Burst mode
	Image adjustment (sharpness, contrast, saturation)

Icon	Description
	Photo styles
	Smart filter effect
	Available number of photos
00:00:20	Available recording time
	Internal memory
	Memory card inserted
	<ul style="list-style-type: none"> <li> : Fully charged</li> <li> : Partially charged</li> <li> : Charging needed</li> </ul>
	Zoom ratio
	Voice memo
	Auto focus frame
	Camera shake
	Option set 1 (of 4)
10:00 AM 2010/01/01	Current date and time
	Grid lines

## B. Option icons (touch)

Icon	Description
	Flash option
	Auto focus option
	Timer option
	Display type

Icon	Description
	<ul style="list-style-type: none"> <li> : Motion recognition</li> <li></li></ul>
	<ul style="list-style-type: none"> <li> : Shooting options and settings menu</li> </ul>
	Image setting options <ul style="list-style-type: none"> <li> : Exposure value</li> <li> : White balance</li> <li> : ISO speed</li> <li> : Face tone</li> <li> : Face retouch</li> <li> : Focus area option</li> <li> : Face detection option</li> <li> : Smart face recognition edit option</li> <li> : Photo resolution</li> <li> : Video resolution</li> <li> : Photo quality</li> <li> : Frame rate</li> <li> : Exposure with ACB</li> <li> : Metering option</li> <li> : Burst type</li> <li> : Photo styles</li> <li> : Smart filter effect</li> <li></li></ul>
	<ul style="list-style-type: none"> <li> : Long time shutter</li> <li> : Optical Image Stabilization (OIS)</li> <li> : Audio recording</li> <li></li></ul>

# Using the touch screen

Learn basic actions to use the touch screen. Use the supplied touch pen to touch or drag on the screen.



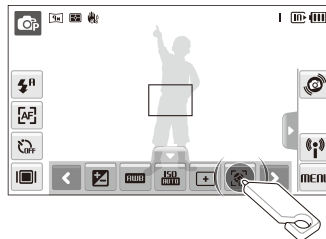
Do not use other sharp objects, such as pens or pencils, to touch the screen. Doing so may damage the screen.



- When you touch or drag on the screen, discolorations will occur. It is not a malfunction but a characteristic of the touch screen. Touch or drag lightly to reduce these annoying effects.
- The touch screen may not recognize your touches correctly when:
  - you touch multiple items at the same time
  - you use the camera in high humidity environments
  - you use the camera with an LCD protection film or another LCD accessory
- If you touch the screen with your finger, the screen may not recognise your input.
- If you perform no operations for few seconds, the screen will dim to save battery life.

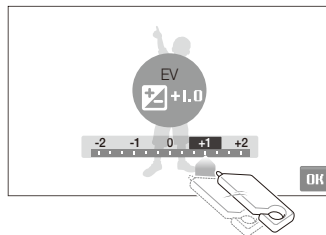
## Touching

Touch an icon to select a menu or option.







## Dragging

Drag left or right to scroll horizontally.



### Using gestures

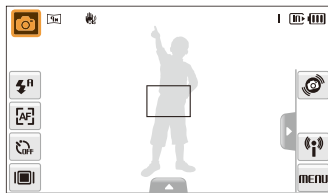
Perform certain functions by drawing commands on the touch screen.

Gesture	Description
	Draw a horizontal bar to right or left to view the next or previous file.
	
	Draw an X to delete a photo.
	Draw a circle to rotate a photo.

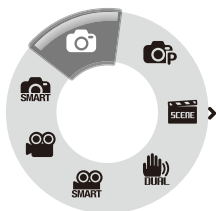
# Selecting a shooting mode







Learn how to select a shooting mode. Your camera provides you with various modes for shooting.

## 1 Select the mode icon.




## 2 Select a mode.



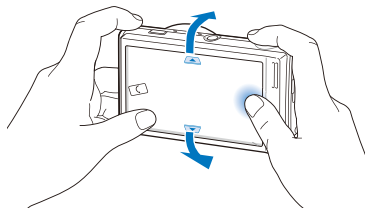
Mode	Description
	<b>Smart Auto:</b> Take a photo by letting the camera select a scene mode as it detects. (p. 33)
	<b>Auto:</b> Take a photo quickly and easily with minimal settings. (p. 27)
	<b>Program:</b> Take a photo by setting options. (p. 38)
	<b>Scene:</b> Take a photo with options preset for a specific scene. (p. 34)
	<b>DUAL IS:</b> Take a photo with options suitable for reducing camera shake. (p. 37)
	<b>Smart Scene Detection:</b> Record a video by letting the camera select a scene mode as it detects. (p. 40)
	<b>Movie:</b> Record a video. (p. 38)

## Selecting a shooting mode using motion recognition

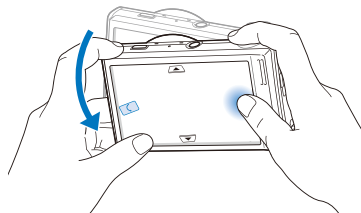
Your camera features a built-in motion sensor that allows you to quickly switch the shooting mode by tilting the camera.

In Shooting mode, tilt the camera while touching and holding .

Access the Movie mode (p. 38)



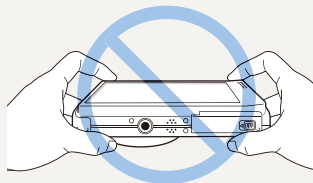
Access the Program mode (p. 38)



Access the Smart Auto mode (p. 33)





Motion recognition may not work well if you hold the camera parallel to the ground, as shown below.

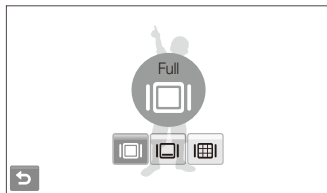






# Setting the touch screen and sound

Learn how to change the basic settings for the touch screen and sound according to your preferences.

## Setting the display type for the touch screen


- 1 In Shooting mode, select .  
(In Playback mode, select .)
- 2 Select an option.



Option	Description
	<b>Full:</b> Display the name of an option when you select an icon.
	<b>Basic:</b> Display icons without the name of an option. This option is available only in Playback mode.
	<b>Hide:</b> Hide icons on the screen if you perform no operations for 3 seconds (touch the screen to display icons again).
	<b>Guide Line:</b> Display grid lines. The grid lines are helpful for getting the photo aligned with a surface, such as the horizon or the edges of buildings. This option is available only in Shooting mode.

## Setting the sound

Set whether your camera emits a specified sound when you operate your camera.


- 1 In Shooting or Playback mode, select **MENU**.
- 2 Select  → **Beep Sound**.
- 3 Select an option.

Option	Description
<b>Off</b>	The camera does not emit any sounds.
<b>On</b>	The camera emits sounds.

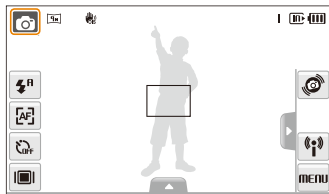
- 4 Select  to return to the previous mode.

# Taking photos

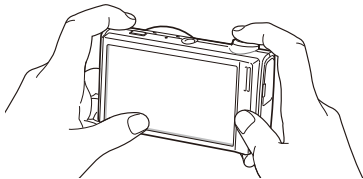
Learn basic actions to take photos easily and quickly in the Auto mode.

- 1 Make sure that the camera is in the  mode (Auto), the camera's default shooting mode.

- If not, select the mode icon → .

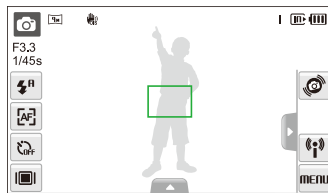


- 2 Align your subject in the frame.



- 3 Half-press **[Shutter]** to focus.

- A green frame means the subject in focus.



- 4 Press **[Shutter]** to take a photo.



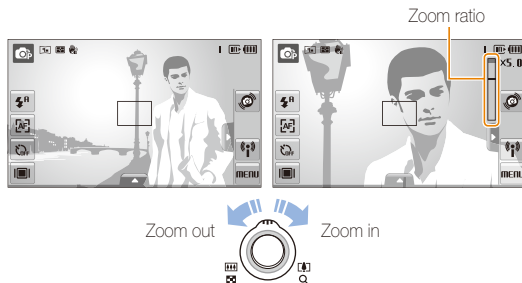
See page 30 for tips to get clearer photos.



## Zooming

You can shoot close-up photos by adjusting the zoom. Your camera has a 7X optical zoom and 5X digital zoom. By using both, you can zoom in up to 35 times.

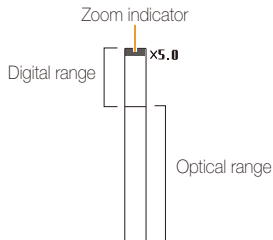
Rotate **[Zoom]** right to zoom in on your subject. Rotate **[Zoom]** left to zoom out.



The zoom ratio available for videos differs.

### Digital zoom

If the zoom indicator is in the digital range, your camera is using the digital zoom. The picture quality may deteriorate when you use the digital zoom.

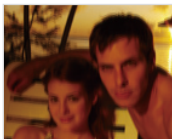


- The digital zoom is not available when using (in some scenes), and modes and when used with **Face Detection**, and **Smart Filter**.
- It may take longer to save a photo when using the digital zoom.

## Reducing camera shake (OIS)



Reduce camera shake optically in Shooting mode.



Before correction



After correction

1 In Shooting mode, select → (once or twice) → .

2 Select an option.

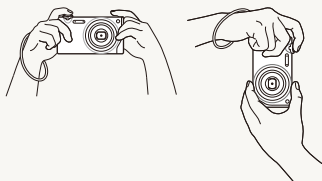
Option	Description
	<b>Off:</b> Deactivate the OIS function.
	<b>On:</b> Activate the OIS function.



- OIS may not function properly when:
  - you move your camera to follow a moving subject
  - you use digital zoom
  - there is too much camera shake
  - the shutter speed is slow (e.g., when you select **Night** in the mode)
  - the battery is low
  - you take a close-up shot
- If you use the OIS function with a tripod, your images may be blurred by the vibration of the OIS sensor. Deactivate the OIS function when you use a tripod.
- If the camera is impacted, the display will be blurry. In this case, turn off the camera and turn it on again to use the OIS function correctly.
- In some scene modes, the OIS function is unavailable.

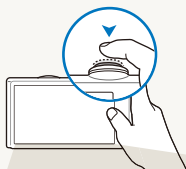
## Tips for getting a clearer photo

### Holding your camera correctly

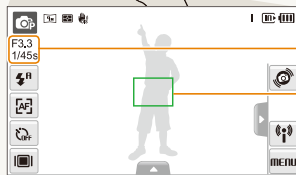


Make sure nothing is blocking the lens.

### Half-pressing the shutter button



Half-press **[Shutter]** and adjust the focus. Focus and exposure will be adjusted automatically.




The aperture value and shutter speed are automatically set.

#### Focus frame

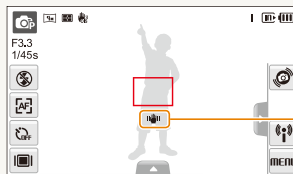
- Press **[Shutter]** to take the photo if displayed in green.
- Change the frame and half-press **[Shutter]** again if displayed in red.

### Reducing camera shake



- Set the Optical Image Stabilization option to reduce camera shake optically. (p. 29)
- Select the  mode to reduce camera shake both optically and digitally. (p. 37)

### When is displayed



Camera shake

When shooting in the dark, avoid setting the flash option to **Slow Sync** or **Off**. The aperture remains open longer and it may be harder to hold the camera still.

- Use a tripod or set the flash option to **Fill in**. (p. 47)
- Set ISO speed options. (p. 48)



## Preventing your subject from being out of focus

It may be difficult to get your subject in focus when:

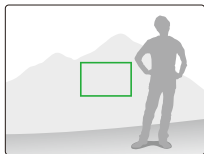
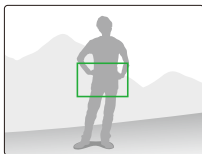
- there is little contrast between the subject and background  
(When your subject is wearing a color of clothing that is similar to the background)
- the light source behind the subject is too bright
- the subject is shiny
- the subject includes horizontal patterns, such as blinds
- the subject is not positioned in the center of the frame



### Use the focus lock

Half-press **[Shutter]** to focus. When the subject is in focus, you can reposition the frame to change the composition.

When you are ready, press **[Shutter]** to take your photo.

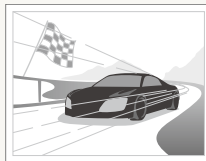


- When you take photos in low light



Turn on the flash.  
(p. 47)

- When subjects are moving fast



Use the continuous  
or motion capture  
function. (p. 62)

# Extended functions

Learn how to take a photo by selecting a mode and how to record a video or voice memo.

<b>Shooting modes</b> .....	33
Using the Smart Auto mode .....	33
Using the Scene mode .....	34
Using the Beauty Shot mode .....	35
Using the frame guide .....	36
Adjusting the exposure in the Night mode .....	36
Using the DUAL IS mode .....	37
Using the Program mode .....	38
Recording a video .....	38
Using the Smart Scene Detection mode .....	40
<b>Recording voice memos</b> .....	41
Recording a voice memo .....	41
Adding a voice memo to a photo .....	41

# Shooting modes

Take photos or record videos by selecting the best shooting mode for the conditions.

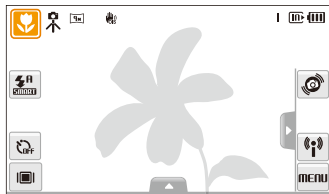
## Using the Smart Auto mode




In this mode, your camera automatically chooses the appropriate camera settings based on a detected type of scene. It will be helpful if you are not familiar with the camera settings for various scenes.

1 In Shooting mode, select  → .

2 Align your subject in the frame.

- The camera selects a scene automatically. An appropriate mode icon will appear at the top left of the screen.



Icon	Description
	Appears when taking photos of landscapes.
	Appears when taking photos of bright white backgrounds.
	Appears when taking photos of landscapes at night. This is available only when the flash is off.

Icon	Description
	Appears when taking portraits at night.
	Appears when taking photos of landscapes with backlighting.
	Appears when taking portraits with backlighting.
	Appears when taking portraits.
	Appears when taking close-up photos of objects.
	Appears when taking close-up photos of text.
	Appears when taking photos of sunsets.
	Appears when taking photos of clear skies.
	Appears when taking photos of forested areas.
	Appears when taking close-up photos of colorful subjects.
	Appears when taking close-up portraits of people.
	Appears when the camera and subject are stable for a while. This is available only when you are shooting in the dark.
	Appears when taking photos of actively moving subjects.
	Appears when taking photos of fireworks. This is available only when you use a tripod.

- 3 Half-press **[Shutter]** to focus.
- 4 Press **[Shutter]** to take the photo.



- If the camera does not recognize a proper scene mode, will not change and the default settings will be used.
- Even if there is a face detected, the camera may not select a portrait mode depending on the subject's position or lighting.
- The camera may not select the correct scene depending on shooting environments, such as camera shake, lighting and distance to the subject.
- Even if you use a tripod, the mode may not be detected depending on the subject's movement.

## Using the Scene mode

Take a photo with options preset for a specific scene.

- 1 In Shooting mode, select → .
- 2 Select a scene.

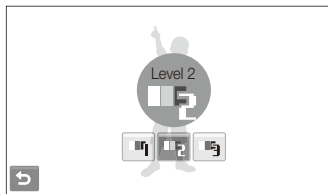




- For the Beauty Shot mode, see "Using the Beauty Shot mode" on page 35.
  - For the Frame Guide mode, see "Using the frame guide" on page 36.
  - For the Night mode, see "Adjusting the exposure in the Night mode" on page 36.
- 3 Align your subject in the frame and half-press **[Shutter]** to focus.
  - 4 Press **[Shutter]** to take the photo.

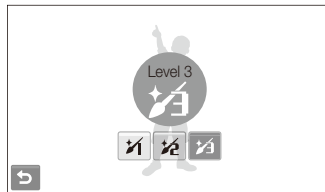
## Using the Beauty Shot mode

Take a photo of a person with options to hide facial imperfections.

- 1 In Shooting mode, select  →  → .
- 2 To make the subject's skin tone appear lighter (face only), select  →  → an option.
  - Select a higher setting to make skin tone appear lighter.



- 3 To hide facial imperfections, select  →  → an option.
  - Select a higher setting to hide a greater number of imperfections.



- 4 Align your subject in the frame and half-press **[Shutter]** to focus.
- 5 Press **[Shutter]** to take the photo.



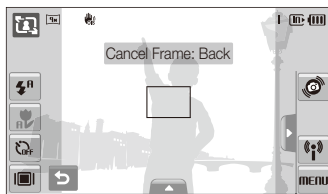
The focus distance will be set to **Auto Macro**.



## Using the frame guide

When you want another person to take a photo of you, you can compose the scene with the frame guide feature. The frame guide will help the other person take a photo of you by showing the part of the pre-composed scene.

- 1 In Shooting mode, select → → .
- 2 Align your subject in the frame and press [Shutter].
  - Transparent guides will appear on the left and right of the frame.

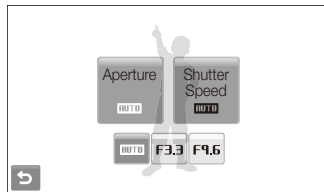


- 3 Ask another person to take a photo.
  - The person must align the subject in the frame by using the guides, and then press [Shutter] to take the photo.
- 4 To cancel the guides, select .

## Adjusting the exposure in the Night mode

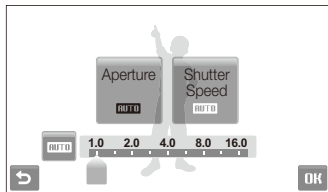
In the Night mode, you can catch brief flashes of light as curved streaks by extending the exposure. Use a slow shutter speed to extend the time until the shutter closes. Increase the aperture value to prevent overexposure.

- 1 In Shooting mode, select → → .
- 2 Select → **LT** → **Aperture**.



- 3 Select an option.

#### 4 Select **▲** → **L T** → **Shutter Speed**.



#### 5 Select a value to adjust the shutter speed and select **OK**.

#### 6 Align your subject in the frame and half-press [**Shutter**] to focus.

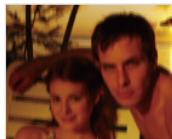
#### 7 Press [**Shutter**] to take the photo.



Use a tripod to prevent your photos from blurring.

### Using the DUAL IS mode

Reduce camera shake and prevent blurred photos with Optical and Digital Image Stabilization functions.



Before correction



After correction

#### 1 In Shooting mode, select **📷** → **👤**.

#### 2 Align your subject in the frame and half-press [**Shutter**] to focus.



#### 3 Press [**Shutter**] to take the photo.

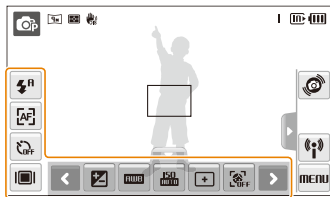


- The digital zoom will not work in this mode.
- The camera will correct photos optically only when you take them with a light source that is brighter than fluorescent light.
- If your subject is moving rapidly, the photo may be blurry.
- Set the Optical Image Stabilization option to reduce camera shake in different shooting modes. (p. 29)

## Using the Program mode

Set various options (except for shutter speed and aperture value) in the Program mode.

- 1 In Shooting mode, select  → .
- 2 Set options. (For a list of options, refer to “Shooting options.”)








- 3 Align your subject in the frame and half-press **[Shutter]** to focus.
- 4 Press **[Shutter]** to take the photo.

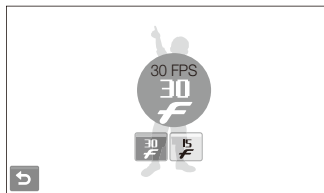
## Recording a video

Record videos of up to 20 minutes in length in high definition. The recorded video is saved as an H.264 (MPEG-4.AVC) file.



- H.264 (MPEG-4 part10/AVC) is a high-compression video format established by international standard organizations ISO/IEC and ITU-T.
- When the Optical Image Stabilization () is activated, your video may be recorded with the OIS operation sound.
- The zoom sound may be recorded if you use the zoom while recording a video.

- 1 In Shooting mode, select  → .
- 2 Select  →  → a frame rate (the number of frames per second).
  - As the number of frames increases, action appears more natural, but the file size is increased.



**60 FPS** is available only when the video resolution is 320 X 240.

- 3 Select → → a sound option.

Option	Description
OFF	<b>Off:</b> Record a video without sound.
	<b>On:</b> Record a video with sound.
ZOOM	<b>Zoom Mute:</b> Record a video without sound while zooming.

- 4 Set other options as desired. (For options, refer to “Shooting options.”)
- 5 Press **[Shutter]** to start recording.
- 6 Press **[Shutter]** again to stop recording.

#### To pause recording



The camera allows you to pause temporarily while recording a video. With this function, you can record your favorite scenes as a single video.

Select to pause while recording. Select to resume.



## Using the Smart Scene Detection mode

In this mode, your camera automatically chooses the appropriate camera settings based on a detected type of scene.


- 1 In Shooting mode, select  → .
- 2 Align your subject in the frame.
  - The camera selects a scene automatically. An appropriate mode icon will appear at the top left of the screen.



Icon	Description
	Appears when recording videos of landscapes.
	Appears when recording videos of clear skies.
	Appears when recording videos of forested areas.
	Appears when recording videos of sunsets.

- 3 Press **[Shutter]** to start recording.
- 4 Press **[Shutter]** again to stop recording.



- If the camera does not recognize a proper scene mode,  will not change and the default settings will be used.
- The camera may not select the correct scene depending on shooting environments, such as camera shake, lighting and distance to the subject.

# Recording voice memos



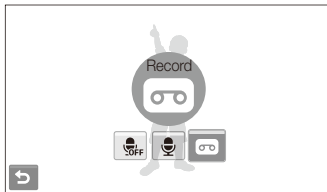
Learn how to record a voice memo that you can play back at any time. You can add a voice memo to a photo as a short reminder of shooting conditions.



You will get the best sound quality when recording 40 cm away from the camera.

## Recording a voice memo

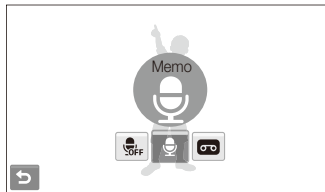
- 1 In Shooting mode, select → → . (In some modes, select → (repeatedly) → → .)



- 2 Press **[Shutter]** to record.
  - Select to pause and to resume.
  - The available recording time will be displayed on the top of the screen.
  - You can record voice memos of up to 10 hours in length.
- 3 Press **[Shutter]** to stop.
- 4 Select to switch to Shooting mode.

## Adding a voice memo to a photo

- 1 In Shooting mode, select → → . (In some modes, select → (repeatedly) → → .)



- 2 Align your subject in the frame and take a photo.
  - You will begin recording a voice memo right after taking the photo.
- 3 Record a short voice memo (10 seconds maximum).
  - Press **[Shutter]** to stop recording a voice memo.

# Shooting options

Learn about the options you can set in Shooting mode.

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# Selecting a resolution and quality

Learn how to change the image resolution and quality settings.

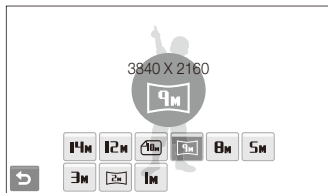
## Selecting a resolution



As you increase the resolution, your photo or video will include more pixels, so it can be printed on larger paper or displayed on a larger screen. When you use a high resolution, the file size will also increase.

### When taking a photo:

- 1 In Shooting mode, select → → .  
(In some modes, select → .)
- 2 Select an option.

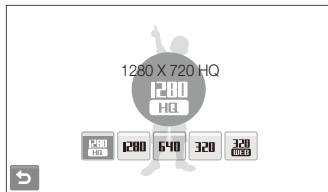




Option	Description
<b>14M</b>	<b>4320 X 3240:</b> Print on A1 paper.
<b>12M</b>	<b>4000 X 3000:</b> Print on A1 paper.
<b>10M</b>	<b>3984 X 2656:</b> Print on A2 paper in wide ratio (3:2).
<b>9M</b>	<b>3840 X 2160:</b> Print on A2 paper in panorama ratio (16:9) or play back on an HDTV.
<b>8M</b>	<b>3264 X 2448:</b> Print on A3 paper.
<b>5M</b>	<b>2560 X 1920:</b> Print on A4 paper.
<b>3M</b>	<b>2048 X 1536:</b> Print on A5 paper.
<b>2M</b>	<b>1920 X 1080:</b> Print on A5 paper in panorama ratio (16:9) or play back on an HDTV.
<b>1M</b>	<b>1024 X 768:</b> Attach to an email.



## When recording a video:






- 1 In the  and  modes, select  → .
- 2 Select an option.

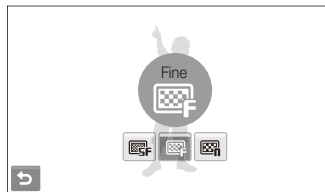





Option	Description
	<b>1280 X 720 HQ:</b> Play back high-quality files on an HDTV.
<b>1280</b>	<b>1280 X 720:</b> Play back on an HDTV.
<b>640</b>	<b>640 X 480:</b> Play back on a general TV.
<b>320</b>	<b>320 X 240:</b> Post on a web page.
	<b>For Sharing:</b> Post on a website using the wireless network (30 seconds maximum).

## Selecting image quality

Photos you take are compressed and saved in JPEG format. Higher quality images will result in larger sizes.

- 1 In Shooting mode, select  →  → .
- (In some modes, select  → .)
- 2 Select an option.



Option	Description
	<b>Super Fine</b>
	<b>Fine</b>
	<b>Normal</b>

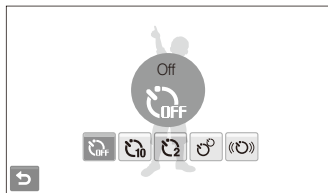
# Using the timer








Learn how to set the timer to delay shooting.

1 In Shooting mode, select .

2 Select an option.



Option	Description
	<b>Off:</b> The timer is not active.
	<b>10 Sec:</b> Take a photo in 10 seconds.
	<b>2 Sec:</b> Take a photo in 2 seconds.
	<b>Double:</b> Take a photo in 10 seconds and take another in 2 seconds.
	<b>Motion Timer:</b> Detect your movement and then take a photo. (p. 46)

The options may differ depending on the shooting mode.



3 Press **[Shutter]** to start the timer.

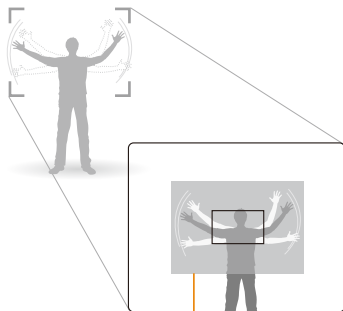
- The AF-assist light/timer lamp blinks. The camera will automatically take a photo at the specified time.



- Select the timer icon or press **[Shutter]** to cancel the timer.
- Depending on the selected face detection option, the timer is not available or some timer options are not available.

### Using the motion timer

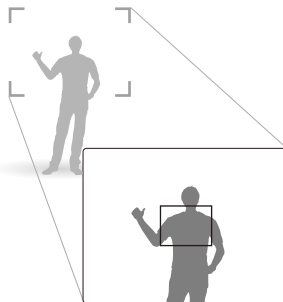
- 1 In Shooting mode, select  → .
- 2 Press **[Shutter]**.
- 3 Stand within 3 m from the camera within 6 seconds after pressing **[Shutter]**.
- 4 Make a motion, such as waving your arms, to activate the timer.
  - The AF-assist light/timer lamp will start to blink rapidly when the camera detects you.



The detection range of the motion timer

- 5 Pose for your photo while the AF-assist light/timer lamp is blinking.

- The AF-assist light/timer lamp will stop blinking just before the camera automatically takes a photo.



The motion timer may not work when:

- you are more than 3 m away from the camera
- your movements are too subtle
- there is too much light or backlight

# Shooting in the dark

Learn how to take photos at night or in low light conditions.

## Preventing red-eye




If the flash fires when you take a photo of a person in the dark, a red glow may appear in the eyes. To prevent this, select **Red-eye** or **Red-eye Fix**. Refer to flash options in "Using the flash."

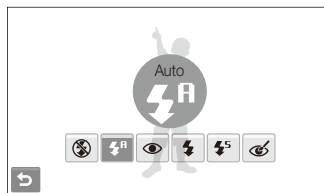







## Using the flash







Use the flash when taking photos in the dark or when you need more light on your photos.

- 1 In Shooting mode, select .
- 2 Select an option.



Option	Description
	<b>Off:</b> <ul style="list-style-type: none"><li>• The flash will not fire.</li><li>• Camera shake warning () will be displayed when shooting in low light.</li></ul>
	<b>Auto:</b> The camera will select a proper flash setting for the detected scene in the  mode.
	<b>Auto:</b> The flash fires automatically when the subject or background is dark.

Option	Description
	<b>Red-eye*:</b> <ul style="list-style-type: none"> <li>The flash fires when the subject or background is dark.</li> <li>The camera reduces red-eyes.</li> </ul>
	<b>Fill in:</b> <ul style="list-style-type: none"> <li>The flash always fires.</li> <li>Light intensity is adjusted automatically.</li> </ul>
	<b>Slow Sync:</b> <ul style="list-style-type: none"> <li>The flash fires and the shutter stays open longer.</li> <li>Select this when you want to capture ambient light to reveal more details in the background.</li> <li>Use a tripod to prevent your photos from blurring.</li> </ul>
	<b>Red-eye Fix*:</b> <ul style="list-style-type: none"> <li>The flash fires when the subject or background is dark.</li> <li>The camera corrects red-eyes through its advanced software analysis.</li> </ul>

The options may differ depending on the shooting mode.

\* There is an interval between two bursts of the flash. Do not move until the flash fires a second time.



- Flash options are not available if you set burst options or select **Blink Detection** or **Self-Portrait**.
- Make sure that your subjects are within the recommended distance from the flash. (p. 126)
- If there is reflected light or much dust in the air, tiny spots may appear on your photo.

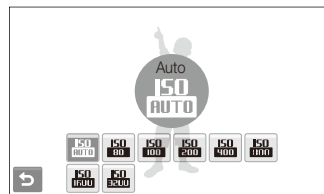
## Adjusting the ISO speed

The ISO speed is the measure of a film's sensitivity to light as defined by the International Organization for Standardization (ISO). The higher ISO speed you select, the more sensitive to light your camera becomes. With a higher ISO speed, you can get a better photo without using the flash.

1 In Shooting mode, select  → .

2 Select an option.

- Select  to use an appropriate ISO speed based on the brightness of the subject and lighting.



The higher ISO speed you select, the more image noise you may get.

# Changing the camera's focus

Learn how to adjust the camera's focus according to your subjects.

## Using macro



Use macro to take close-up photos of subjects, such as flowers or insects. Refer to macro options in "Using auto focus."



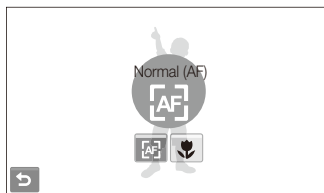
- Try to hold the camera very still to prevent blurry photos.
- Turn off the flash if the distance to the subject is less than 40 cm.

## Using auto focus



To take sharp photos, select the appropriate focus according to your distance from the subject.

- 1 In Shooting mode, select **[AF]**.
- 2 Select an option.






Option	Description
	<b>Normal (AF):</b> Focus on a subject farther than 80 cm (farther than 150 cm when using zoom).
	<b>Auto Macro:</b> Focus on a subject farther than 5 cm (farther than 70 cm when using zoom).
	<b>Macro:</b> Focus on a subject 5 - 80 cm (70 - 150 cm when using zoom).

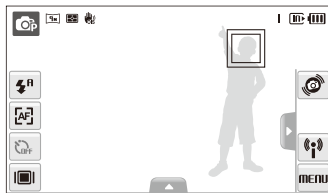
The options may differ depending on the shooting mode.

### Using smart touch focus

Smart Touch AF allows you to track and auto focus on your subject, even when you are moving.

- 1 In Shooting mode, select  →  → .
- 2 Touch the subject you want to track in the touch area (indicated by a frame).

- A focus frame will appear on the subject and will follow the subject as you move the camera.






- The white frame means that your camera is tracking the subject.
- The green frame means that your subject is in focus when you half-press **[Shutter]**.

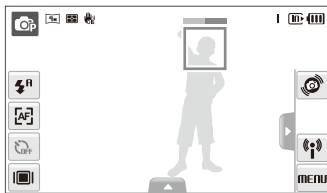


- If you do not touch any area on the screen, the focus frame will appear in the center of the screen.
- Tracking a subject may fail when:
  - the subject is too small or the subject moves
  - the subject is backlit or you are shooting in a dark place
  - colors or patterns on the subject and the background are the same
  - the camera shakes excessivelyIn these cases, the focus frame will appear as a white single-line frame.
- If the camera fails to track the subject, you must reselect the subject to track.
- If the camera fails to fix the focus, the focus frame will change to a red single-line frame.
- If you use this function, you cannot set face detection, photo style options, and smart filter effects.

## Using one touch shooting

You can focus on your subject and take a photo with a touch of your finger.



- 1 In Shooting mode, select  →  → .
- 2 Touch a subject to focus.
- 3 Touch and hold the subject to take the photo.
  - Touch and hold until the level indicator fills up.

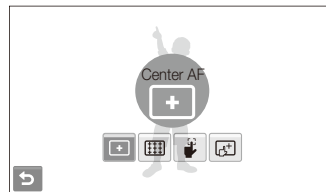






- When you use face detection, you should touch and hold the image of detected face. If you touch and hold any other area, the frame to detect faces will change to a normal frame.
- If you use this function, you cannot set burst options, photo style options, and smart filter effects.

## Adjusting the focus area

You can get clearer photos by selecting an appropriate focus area according to your subject's location in the scene.

- 1 In Shooting mode, select  → .
- 2 Select an option.



Option	Description
	<b>Center AF:</b> Focus on the center (suitable when subjects are located in the center).
	<b>Multi AF:</b> Focus on one or more of 9 possible areas.
	<b>One Touch Shooting:</b> Focus on the subject by touching the image on the screen. Touch and hold the subject to take the photo.
	<b>Smart Touch AF:</b> Focus on and track the subject that you touch on the screen. (p. 50)

The options may differ depending on the shooting mode.



# Using face detection



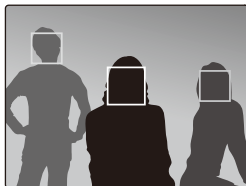
If you use face detection options, your camera can automatically detect a human face. When you focus on a human face, the camera adjusts the exposure automatically. Take photos quickly and easily by using **Blink Detection** to detect closed eyes or **Smile Shot** to capture a smiling face. You can also use **Smart Face Recognition** to register faces and prioritize the focus on them.



- In some scene modes, face detection is unavailable.
- Face detection may not be effective when:
  - the subject is far from the camera (The focus frame will appear orange for **Smile Shot** and **Blink Detection**)
  - it is too bright or too dark
  - the subject is not facing the camera
  - the subject is wearing sunglasses or a mask
  - the subject is in backlighting or the lighting condition is unstable
  - the subject's facial expression changes remarkably
- Face detection is not available when using a photo style or a smart filter effect.
- When you use the face detection option, the digital zoom will not work.
- Depending on the selected face detection option, the timer is not available or some timer options are not available.
- Depending on the selected face detection option, some burst options are not available.
- When you take photos of detected faces, they will be registered in the face list.
- You can view registered faces in order of priority in Playback mode. (p. 69) Even though faces are registered successfully, they may not be classified in Playback mode.
- The detected face in Shooting mode may not appear in the face list or Smart Album.

## Detecting faces

Your camera automatically detects human faces (up to 10 human faces).



In Shooting mode, select  →  → . The nearest face appears in a white focus frame and the rest of the faces appear in gray focus frames.






- The closer you are to the subject, the quicker your camera will detect faces.
- If you want to focus faces in gray focus frames, touch them to focus.
- When you use the burst option, the detected faces may not be registered.

## Taking a self portrait shot

Take photos of yourself. The focus distance will be set to close-up and your camera will emit a beep.



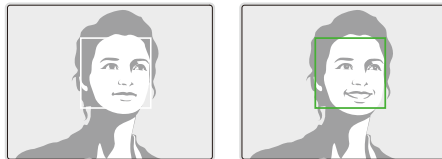
- 1 In Shooting mode, select  →  → .
- 2 When you hear a quick beep, press **[Shutter]**.



To turn the beep on or off, select **Self-Portrait** in the sound settings. (p. 113)

## Taking a smile shot

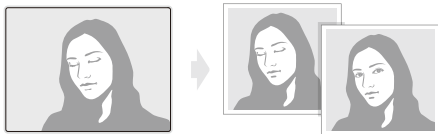
The camera automatically releases the shutter when it detects a smiling face.



In Shooting mode, select  →  → . When your subject smiles broadly, your camera can detect the smile more easily.

## Detecting eye blinking

If your camera detects closed eyes, it will automatically take 2 photos in succession.



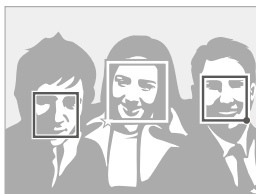
In Shooting mode, select  →  → .





- Hold your camera still while **"Capturing"** is displayed on the screen.
- When blink detection fails, **"Picture taken with eyes closed."** message appears. Take another photo.

## Using smart face recognition

The camera automatically registers faces that you frequently photograph. This feature will automatically prioritize the focus on those faces and favorite faces. This feature is available only when you use a memory card.



In Shooting mode, select  →  → . The nearest face appears in a white focus frame and the rest of the faces appear in gray focus frames.

-  : Indicate favorite faces  
(To register favorite faces, see page 55).
-  : Indicate faces that the camera automatically registers.



- The camera may recognize and register faces incorrectly depending on lighting conditions, remarkable changes in the subject's pose or face, and whether or not the subject is wearing glasses.
- The camera can automatically register up to 14 faces. If the camera recognizes a new face when there are 14 registered faces, it will replace the face in the lowest priority with the new one.
- The camera can detect up to 10 faces in one scene.

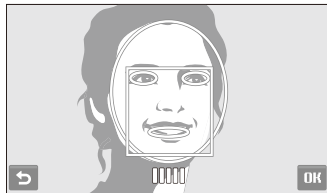
## Registering faces as your favorites (My Star)

You can register your favorite faces to prioritize the focus and exposure on those faces. This feature is available only when you use a memory card.

- 1 In Shooting mode, select → → → .  
(In some modes, select → → .)

- 2 Align your subject's face with the oval guideline and press **[Shutter]** to register the face.

- If the subject's face is not aligned with the oval guideline, the white frame will not appear.
- You can take photos of a subject's face directly from the front, to the left side, to the right side, from above, or from below.
- Take photos of one person at a time when registering faces.



### 3 Select when the face list appears.

- Your favorite faces are indicated with a ★ on the face list.



- You can register up to 6 favorite faces.
- The flash option will be set to **Off**.
- If you register the same face twice, you can delete one of the faces in the face list.

#### Viewing your favorite faces

In Shooting mode, select  →  →  → .

(In some modes, select  →  → .)

- Select  to change the ranking of your favorite faces.



See page 69 for more information about the face list.

# Adjusting brightness and color

Learn how to adjust the brightness and color for better image quality.

## Adjusting the exposure manually (EV)



Depending on the intensity of the ambient light, your photos may be too bright or dark. In these cases, you can adjust the exposure to get a better photo.



Darker (-)



Neutral (0)

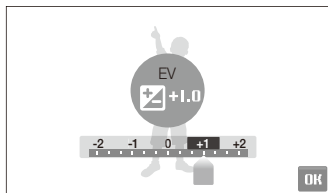


Brighter (+)

1 In Shooting mode, select → .

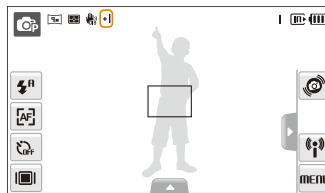
2 Select a value to adjust the exposure.

- +: brighter, -: darker



3 Select **OK**.

- The adjusted exposure value will appear as shown below.



- Once you adjust the exposure, the setting will remain the same. You may need to change the exposure value later to avoid overexposure or underexposure.
- If you cannot decide on an appropriate exposure, select **AEB** (Auto Exposure Bracket). The camera takes photos with different exposures: normal, underexposed, and overexposed. (p. 62)

## Compensating for backlighting (ACB)



When the light source is behind your subject or there is high contrast between your subject and the background, your subject is likely to appear dark in the photo. In this case, set the Auto Contrast Balance (ACB) option.




Without ACB






With ACB

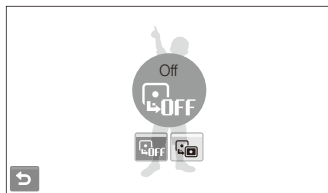
Option	Description
 OFF	<b>Off:</b> ACB is off.
	<b>On:</b> ACB is on.



- The ACB feature is always on in the  mode.
- This feature is not available when **Continuous**, **Motion Capture**, or **AEB** is in use.

1 In Shooting mode, select  →  → .

2 Select an option.

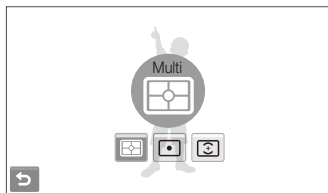


## Changing the metering option



The metering mode refers to the way in which a camera measures the quantity of light. The brightness and lighting of your photos will vary depending on the metering mode you select.

1 In Shooting mode, select → → .  
(In the and modes, select → .)

2 Select an option.



Option	Description
	<b>Multi:</b> <ul style="list-style-type: none"> <li>Your camera divides the scene into several areas, and then measures the light intensity of each area.</li> <li>Suitable for general photos.</li> </ul>

Option	Description
	<b>Spot:</b> <ul style="list-style-type: none"> <li>Your camera measures only the light intensity of the very center of the frame.</li> <li>If a subject is not in the center of the scene, your photo may be improperly exposed.</li> <li>Suitable for a subject with backlighting.</li> </ul>
	<b>Center-weighted:</b> <ul style="list-style-type: none"> <li>Your camera averages the meter reading of the entire frame with emphasis placed on the center.</li> <li>Suitable for photos with subjects in the center of the frame.</li> </ul>



## Selecting a light source (White balance)



The color of your photo depends on the type and quality of the light source. If you want the color of your photo to be realistic, select an appropriate lighting condition to calibrate the white balance, such as Auto WB, Daylight, Cloudy, or Tungsten.



**AWB** Auto WB




 Daylight

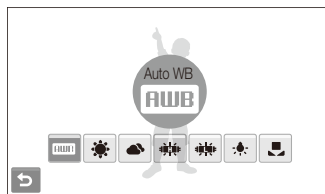




 Cloudy



 Tungsten



- 1 In Shooting mode, select  → **AWB**.
- 2 Select an option.



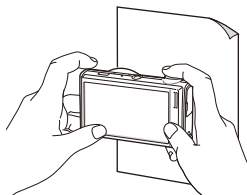
Option	Description
	<b>Auto WB:</b> Use automatic settings depending on the lighting conditions.
	<b>Daylight:</b> Select when taking outdoor photos on a sunny day.
	<b>Cloudy:</b> Select when taking outdoor photos on a cloudy day or in shadows.
	<b>Fluorescent_H:</b> Select when shooting under a daylight fluorescent or three-way fluorescent light.
	<b>Fluorescent_L:</b> Select when shooting under white fluorescent light.
	<b>Tungsten:</b> Select when taking indoor photos under incandescent bulbs or halogen lamps.
	<b>Custom Set:</b> Use your pre-defined settings. (p. 61)

### Defining your own white balance

You can customize the white balance by taking photos of a white surface, such as a piece of paper. This will help you to match the colors in your photo with the actual scene according to your lighting condition.

1 In Shooting mode, select  → **AWB** → .

2 Aim the lens at a piece of white paper.



3 Press **[Shutter]**.

# Using burst modes

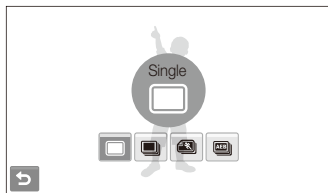




It can be difficult to take photos of fast-moving subjects or capture natural facial expressions and gestures of your subjects in photos. In these cases, select one of the burst modes.





1 In Shooting mode, select **▲** → **➤** (once or twice) → .

2 Select an option.



Option	Description
	<b>Single:</b> Take a single photo.
	<b>Continuous:</b> <ul style="list-style-type: none"><li>While you are pressing <b>[Shutter]</b>, the camera takes photos continuously.</li><li>The maximum number of photos depends on the capacity of your memory card.</li></ul>

Option	Description
	<b>Motion Capture:</b> While you are pressing <b>[Shutter]</b> , the camera takes VGA photos (6 photos per second; maximum of 30 photos).
	<b>AEB:</b> <ul style="list-style-type: none"><li>Take 3 photos with different exposures: normal, underexposed, and overexposed.</li><li>Use a tripod to prevent blurry photos.</li></ul>

The options may differ depending on the shooting mode.



- You can use the flash, timer, and ACB only when you select **Single**.
- When you select **Motion Capture**, the resolution will be set to VGA and the ISO speed will be set to **Auto**.
- Depending on the selected face detection option, some burst options are not available.

# Improving your photos

Learn how to improve your photos by applying photo styles, colors, or smart filter effects, or make some adjustments.

## Applying photo styles

Apply different styles to your photos, such as Soft, Vivid, or Forest.



Soft

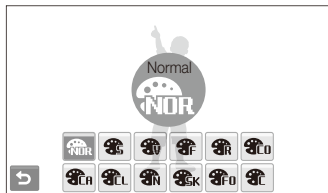


Vivid






Forest

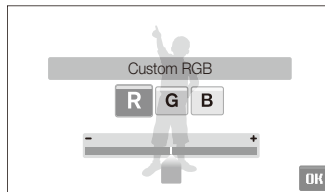
- 1 In Shooting mode, select  →  (once or twice) → .
- 2 Select an option.
  - Select  to define your own RGB tone.



- When you select **Sketch**, the photo will be automatically resized to **5M** or smaller.
- If you use this function, you cannot set the smart filter and image adjustment options.

## Defining your own RGB tone

- 1 In Shooting mode, select  →  (once or twice) →  → .
- 2 Select a color (R: Red, G: Green, B: Blue).
- 3 Adjust the amount of the selected color.



- 4 Select **OK**.

## Applying smart filter effects

Apply various filter effects to your photos to create unique images.



Miniature



Vignetting








Fish-eye 1




Fish-eye 2

- 1 In Shooting mode, select  →  (once or twice) → .
- 2 Select an effect.

Option	Description
	<b>Normal:</b> No effect
	<b>Miniature:</b> Make a photo of a life-size location or object look like a photo of a miniature scale model. Blurring parts of the photo makes the scene seem much smaller than it actually is.
	<b>Vignetting:</b> Apply the retro-looking colors, high contrast, and strong vignette effect of lomo cameras.
	<b>Fish-eye 1:</b> Distort close objects to imitate the visual effect of a fisheye lens.
	<b>Fish-eye 2:</b> Blacken the edges of the frame and distort objects to imitate the visual effect of a fisheye lens.



- If you select **Miniature** when recording a video, the miniature recording time is displayed with the  icon and is shorter than the real recording time.
- If you select **Miniature** when recording a video, the sound will not be recorded.
- When you apply a smart filter effect while recording a video, the video will be automatically resized to **640** or smaller.
- If you use this function, you cannot set the photo style and image adjustment options.

## Adjusting your photos

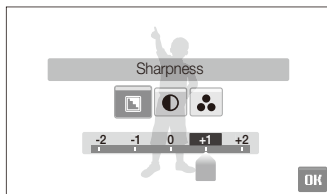
Adjust the sharpness, saturation, and contrast of your photos.

1 In Shooting mode, select  →  (twice) → .

2 Select an adjustment option.

- : Sharpness
- : Contrast
- : Saturation

3 Select a value to adjust the selected item.



Sharpness option	Description
-	Soften the edges on your photos (suitable for editing the photos on your computer).
+	Sharpen the edges to improve the clarity of your photos. This may also increase the noise on your photos.

Contrast option	Description
-	Decrease the color and brightness.
+	Increase the color and brightness.

Saturation option	Description
-	Decrease the saturation.
+	Increase the saturation.



- Select **0** if you do not want to apply any effects (suitable for printing).
- If you use this function, you cannot set the smart filter effects.

# Playback/Editing

Learn how to play back photos, videos, or voice memos and edit photos or videos. Also, learn how to connect your camera to your photo printer, TV, or HDTV.

<b>Playing back</b> .....	67	<b>Transferring files to your computer</b>	
Starting Playback mode .....	67	<b>(for Windows)</b> .....	86
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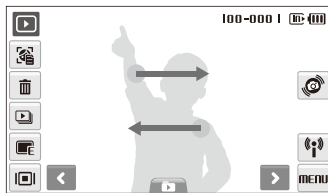
# Playing back

Learn actions to play back photos, videos, or voice memos, and managing files.

## Starting Playback mode

View photos or play videos and voice memos stored in your camera.

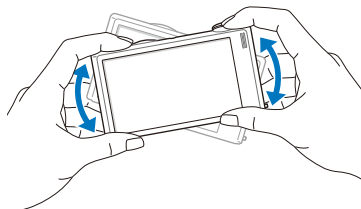
- 1 Press [Playback].
  - The most recent file you have taken or recorded will be displayed.
  - If the camera is off, it will turn on.
- 2 Draw a horizontal bar left or right to scroll through files.
  - Select ◀ to view the previous file. Hold to view files quickly.
  - Select ▶ to view the next file. Hold to view files quickly.



- If you want to view files stored in the internal memory, remove your memory card.
- The camera will not properly play back files that are too large or those taken with cameras from other manufacturers.

## Viewing files using motion recognition

You can view files by tilting the camera.




- Motion recognition may not work well if you hold the camera parallel to the ground.
- When you rotate the camera 90° or 180° while viewing a photo, the camera will automatically change the orientation of the displayed photo according to the camera direction.
- To deactivate this function, select **MENU** → → **Gesture View** → **Off** in Playback mode.

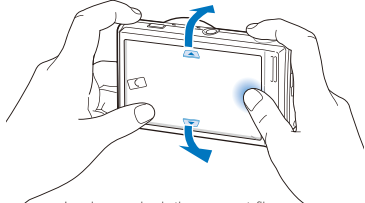


### Selecting a menu using motion recognition

Your camera features a built-in motion sensor that allows you to quickly select a menu by tilting the camera.

In Playback mode, tilt the camera while touching and holding .

Set the current photo as your favorite photo\*  
(♥ will appear on the top of the file.)

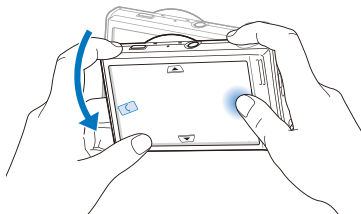


Lock or unlock the current file  
(🔒 will appear on the top of the file.)



\* You cannot set files as favorites for:

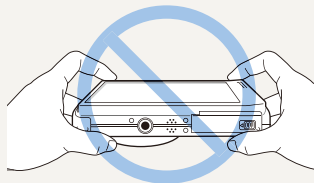
- videos or voice memos
- photos with errors or locked photos
- photos taken with cameras from other manufacturers
- photos taken using the motion capture option set
- photos that are too large for the available memory



Start a slide show (p. 74)



Motion recognition may not work well if you hold the camera parallel to the ground, as shown below.



## Display in Playback mode



Information

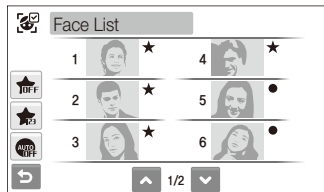
Icon	Description
	Photo includes a voice memo
	Video file
	Print order has been set (DPOF)
	Protected file
	Photo includes a registered face; Available only when you use a memory card
	Favorite file
<b>100-0001</b>	Folder name – File name
	Open the face list (p. 69); Available only when you use a memory card
	Delete files (p. 72)
	Play a slide show (p. 74)
	Edit photos (p. 78)
	Select a display type (p. 26)

Icon	Description
	Select a menu using motion recognition (p. 68)
	Use network menus and the Bluetooth feature (p. 94)
<b>MENU</b>	Playback and settings menus
<b>00:00:20</b>	Playback time of videos or voice memos
	Play videos or voice memos (Video p. 75/Voice memo p. 76)

## Ranking your favorite faces

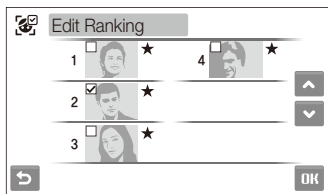
You can change the ranking of your favorite faces or delete them. This feature is available only when you use a memory card.

1 In Playback mode, select



- Select to cancel your favorite faces.
- Select to view your favorite faces or view all faces.

## 2 Select ★ → a face.

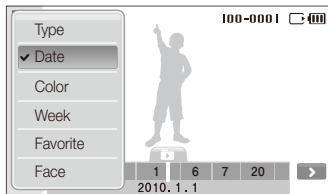


## 3 Select ▲ or ▼ to change the ranking of the face and select OK.

### Viewing files by category in Smart Album

View and manage files by categories, such as date, file type, or week.

- 1 In Playback mode, select → **DATE** → a category.
  - You can also access Smart Album by rotating [Zoom] left.



Option	Description
Type	View files by the file type.
Date	View files by the date they were saved.
Color	View files by the dominant color of the image.
Week	View files by the weekday they were saved.
Favorite	View your favorite files.
Face	View files by recognized faces and favorite faces. (Up to 20 people)



It may take some time for the camera to open Smart Album or to change the category and reorganize files.

- 2 Select a date, file type, weekday, color, or face.
  - You can also touch and hold ◀ or ▶ to scroll through dates, file types, weekdays, colors, or faces.
- 3 Select ◀ or ▶ to scroll through files.
- 4 Select to return to the normal view.



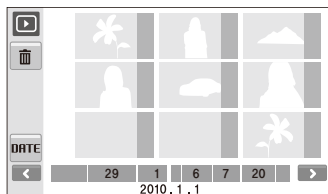
Once you select a category and a menu that displays thumbnails (such as deleting multiple files or protecting selected files), the camera will display all files sorted by category or only those that match the category option.

### Viewing files as thumbnails

Scan thumbnails of files.



In Playback mode, rotate **[Zoom]** left to display 9 or 16 thumbnails (rotate **[Zoom]** right to return to the previous mode).



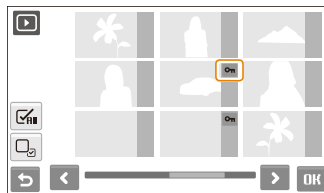
To	Do this
Scroll through files	Select <b>◀</b> or <b>▶</b> .
View a file	Select a thumbnail.
Delete files	Select <b>🗑️</b> . (p. 72)
Select a category	Select <b>DATE</b> .

### Protecting files

Protect your files from accidental deletion.

To select and protect files,

- 1 In Playback mode, select **MENU**.
- 2 Select **Protect** → **Select**.
- 3 Select files you want to protect.
  - Select **☑️** to select all files.
  - Select **👉** to cancel your selection.



- 4 Select **OK**.


### To protect all files,

- 1 In Playback mode, select **MENU**.
- 2 Select **Protect** → **All** → **Lock**.




### Deleting files

Delete single files or all files at once. You cannot delete protected files.

### To delete a single file,

- 1 In Playback mode, select a file → .
- 2 Select **Yes** to delete the file.

### To delete multiple files,

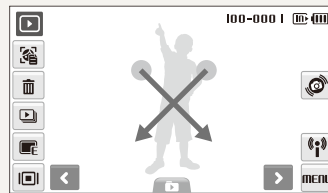
- 1 In Playback mode, select  → **Multiple Delete**.
- 2 Select files you want to delete.
  - Select  to select all files on the current screen.
  - Select  to cancel your selection.
- 3 Select **OK** → **Yes**.

### To delete all files,

- 1 In Playback mode, select **MENU**.
- 2 Select **Delete** → **All** → **Yes**.

### Alternate way to delete a file

While viewing a file in Playback mode, draw an X on the screen.



### Using the recycle bin

If you activate the recycle bin, files you delete will be sent to the recycle bin instead of being deleted permanently. This applies to single files or selected files only—if you choose to delete all files, those files will not be sent to the recycle bin.

**To activate the recycle bin,**

- 1 In Playback mode, select **MENU**.
- 2 Select **Recycle Bin** → **On**.

**To restore files from the recycle bin,**

- 1 In Playback mode, select **MENU**.
- 2 Select **Recycle Bin** → **Retrieve**.



- This function does not work for videos or voice memos.
- It may take longer to delete files when using the recycle bin function.
- If you format the internal memory, all files in the recycle folder will be deleted.
- The recycle bin will hold up to 10 MB of files. Once you exceed the 10 MB limit, the camera asks you whether to empty the recycle bin. Select **Yes** to empty the recycle bin or **No** to delete only the current file.

### Copying files to the memory card

You can copy files from the internal memory to a memory card.

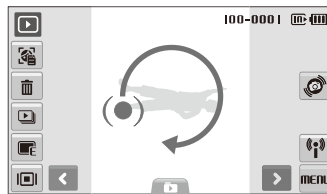
- 1 In Playback mode, select **MENU**.
- 2 Select ♥ → **Copy to Card**.
- 3 Select **Yes** to copy files.

## Viewing photos

View a photo by changing the orientation by gesture or zooming in on part of a photo or view photos as a slide show.

### Rotating a photo by gesture

While viewing a single file, drag your finger as shown below to rotate the photo 90°.



### Enlarging a photo



In Playback mode, rotate **[Zoom]** right to enlarge a photo (rotate **[Zoom]** left to reduce a photo).

The enlarged area and zoom ratio are indicated on the top of the screen. The maximum zoom ratio may vary depending on the resolution. Select arrows to move the enlarged area.

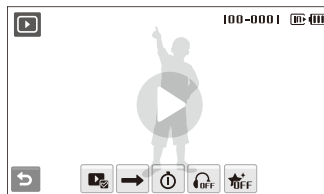


Icon	Description
	Delete the file.
	Crop the enlarged photo (it will be saved as a new file).
	Go back to the original view.




### Starting a slide show

You can apply effects and audio to your slide show. This function does not work for videos or voice memos.



- 1 In Playback mode, select
- 2 Set a slide show effect.



Option	Description
	<b>Images:</b> Select photos (up to 2,000) for your slide show.
	<b>Play Mode:</b> Select whether or not to loop the slide show.
	<b>Interval:</b> Set the interval between photos. <ul style="list-style-type: none"> <li>• This will be available when  is selected in the <b>Effect</b> menu.</li> <li>• When used with an effect option other than , the interval will be set to 1 sec.</li> </ul>


Option	Description
	<b>Music:</b> Select background audio.
	<b>Effect:</b> <ul style="list-style-type: none"> <li>Select a transition effect.</li> <li>Select  for no effects.</li> </ul>

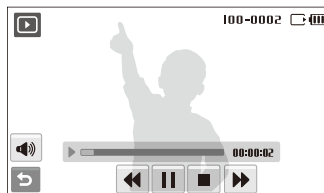
### 3 Select to start the slide show.






- Touch on the screen (except for option icons) to pause the slide show.
- Select  to adjust the volume of background audio or to mute the sound.
- Select  to switch to Playback mode.

## Playing a video

You can play a video, capture an image from a video, or crop a video.



- 1 In Playback mode, select a video → .
- 2 Use the following icons to control playback.



Icon	Description
	Scan backward.
	Pause or resume playback.
	Stop playback.
	Scan forward.
	Adjust volume or mute sound.




### Trimming a video during playback

- 1 Select **||** at the point where you want the new video to begin and select .
- 2 Select **▶** to resume playback.
- 3 Select **||** at the point where you want the new video to end and select .
- 4 Select **Yes**.



- The original video should be at least 10 seconds long.
- The edited video will be saved as a new file.

### Capturing an image during playback


- 1 Select **||** at the point where you want to save a still image.
- 2 Select .
- 3 Select **Yes**.








A captured image will have the same file size as the original video file and will be saved as a new file.

## Playing a voice memo

### Playing a voice memo

- 1 In Playback mode, select a voice memo → .
- 2 Use the following icons to control playback.



Icon	Description
	Scan backward.
	Pause or resume playback.
	Stop playback.
	Scan forward.
	Adjust volume or mute sound.

### Adding a voice memo to a photo

- 1 In Playback mode, select a photo → **MENU**.
- 2 Select **Voice Memo** → **On**.
- 3 Press [**Shutter**] to record a short voice memo (10 seconds maximum).
  - Press [**Shutter**] to stop recording a voice memo.

### Playing a voice memo added to a photo

- 1 In Playback mode, select a photo that includes a voice memo → **▶**.
- 2 Use the following icons to control playback.



Icon	Description
<b>  /▶</b>	Pause or resume playback.
<b>■</b>	Stop playback.
<b>🔊</b>	Adjust volume or mute sound.

# Editing a photo

Perform photo editing tasks, such as rotating, resizing, eliminating red-eyes, and adjusting brightness, contrast, or saturation.



- Edited photos will be saved as new files.
- When you edit photos that are 8m or larger, they will be automatically resized to a lower resolution (except when rotating or resizing photos).

## Rotating a photo

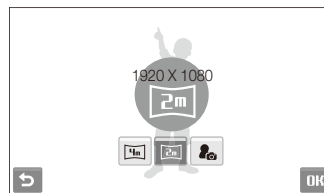
- 1 In Playback mode, select a photo →
- 2 Select → an option.



- 3 Select **OK**.

## Resizing photos

- 1 In Playback mode, select a photo →
- 2 Select → an option.
  - Select to save the photo as a start image. (p. 113)



- 3 Select **OK**.



Available options differ depending on the size of the selected photo.

## Applying photo styles

Apply a different color tone to the photo, such as Soft, Vivid, or Forest.



Soft

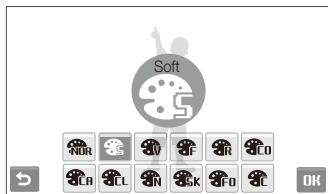


Vivid



Forest

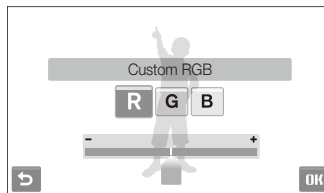
- 1 In Playback mode, select a photo →
- 2 Select → an option.
  - Select to define your own RGB tone.



- 3 Select **OK**.

## Defining your own RGB tone

- 1 In Playback mode, select a photo → → → .
- 2 Select a color (R: Red, G: Green, B: Blue).
- 3 Adjust the amount of the color.



- 4 Select **OK**.

## Applying smart filter effects

Apply various filter effects to your photos to create unique images.



Miniature




Vignetting



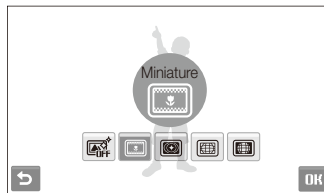
Fish-eye 1



Fish-eye 2

1 In Playback mode, select a photo → .



2 Select  → an effect.

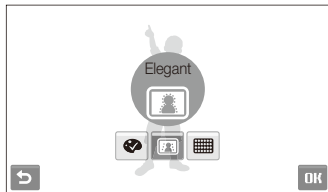





3 Select **OK**.

## Applying a special effect

Apply special effects to the photo, such as color filters or noise effects.

- 1 In Playback mode, select a photo → .
- 2 Select  → an option.








Option	Description
	<b>Color Filter:</b> Change background colors to black and white to make the main subject stand out.
	<b>Elegant:</b> Apply effects to the photo to make it brighter and softer.
	<b>Add Noise:</b> Add noise to the photo to give it an aged look.

- 3 Select **OK**.


## Correcting exposure problems

Adjust ACB (Auto Contrast Balance), brightness, contrast, or saturation.

### Adjusting brightness/contrast/saturation

- 1 In Playback mode, select a photo → .
- 2 Select  → an adjustment option.
  - : Brightness
  - : Contrast
  - : Saturation
- 3 Select a value to adjust the selected item.  
(-: less or +: more)
- 4 Select **OK**.




### Adjusting ACB (Auto Contrast Balance)

- 1 In Playback mode, select a photo → .
- 2 Select  → .
- 3 Select **OK**.




## Editing photos of portraits

You can improve your photos by hiding facial imperfections and removing red-eye.

### Hiding facial imperfections

- 1 In Playback mode, select a photo → .
- 2 Select  → .
- 3 Select a level.
  - As the number increases, more imperfections are hidden.
- 4 Select **OK**.

### Removing red-eye




- 1 In Playback mode, select a photo → .
- 2 Select  → .
- 3 Select **OK**.

## Creating a print order (DPOF)

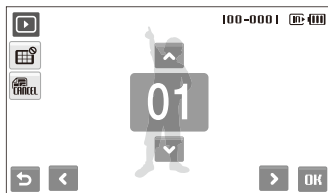
Select photos to be printed and set options, such as number of copies or paper size.



- The memory card can be taken to a print shop that supports DPOF (Digital Print Order Format) or you can print photos directly through a DPOF-compatible printer at home.
- Wide photos may print with the left and right edges cut off, so be aware of the dimensions of your photos.
- You cannot set the DPOF for the photos stored in the internal memory.

- 1 In Playback mode, select **MENU**.
- 2 Select  → **DPOF** → **Select**.
  - To print all files, select **All** and skip to step 5.
- 3 Select photos to print.
  - Select  to select all files.
  - Select  to cancel your selection.
- 4 Select **OK**.

## 5 Set DPOF options.



Option	Description
	Select whether to print the photos as thumbnails. (Select  to print photos as thumbnails.)
	Specify the size of the print.

## 6 Select ▲ or ▼ to set the number of copies.

## 7 Select **OK**.





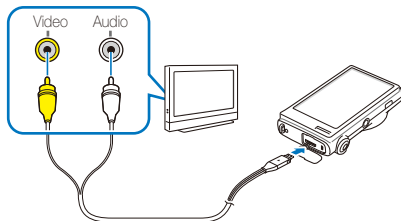
If you specify the print size, you can print photos only with DPOF 1.1-compatible printers.



# Viewing files on a TV or HDTV

Play back photos or videos by connecting your camera to a TV using the A/V cable.

- 1 In Shooting or Playback mode, select **MENU** → .
- 2 Select  (twice) → **Video Out**.
- 3 Select a video signal output according to your country or region. (p. 115)
- 4 Turn off your camera and TV.
- 5 Connect your camera to your TV using the A/V cable.



- 6 Turn on your TV and select the video output mode using the TV remote control.
- 7 Turn on your camera and press [**Playback**].

- 8 View photos or play videos using the touch screen on your camera.



- The touch screen will function as the controller for the TV screen. Locate the option you want on the TV screen and touch where the option is located on the camera screen. When a pointer appears on the option on the TV screen, select **OK** on the camera screen.

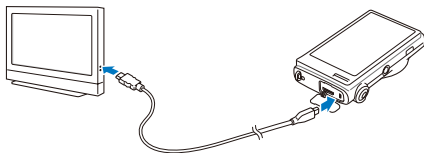


- On some TVs, digital noise may occur or part of an image may not appear.
- Images may not appear centered on the TV screen depending on your TV settings.
- You can capture photos or videos while the camera is connected to a TV.

### Viewing files on an HDTV

You can view high-quality and uncompressed photos or videos on an HDTV using the optional HDMI cable. HDMI (High Definition Multimedia Interface) is supported by most HDTVs.

- 1 In Shooting or Playback mode, select **MENU** → .
- 2 Select  (twice) → **HDMI Size**.
- 3 Select an HDMI resolution.
- 4 Turn off your camera and HDTV.
- 5 Connect your camera to your HDTV using an optional HDMI cable.



- 6 Turn on your camera.
  - The HDTV will be powered on automatically and the camera screen will be displayed.
- 7 View files using a remote control of your camera or HDTV.



If your HDTV supports the Anynet+ (CEC) profile, turn the Anynet+ on in the settings menu (p. 115) to control all connected Samsung A/V devices with the TV remote control.

# Transferring files to your computer (for Windows)

Transfer files to your computer using the built-in Intelli-studio program. You can also edit files or upload files to your favorite websites.

## Requirements for Intelli-studio

Item	Requirements
CPU	Intel Pentium 4, 3.2 GHz or higher/ AMD Athlon™ FX 2.6 GHz or higher
RAM	Minimum 512 MB RAM (1 GB and above recommended)
OS	Windows XP SP2/Vista/7
Hard disk capacity	250 MB or more (1 GB or more recommended)
Others	<ul style="list-style-type: none"><li>• CD-ROM driver</li><li>• nVIDIA Geforce 7600GT or higher/ATI X1600 series or higher</li><li>• 1024 X 768 pixels, 16-bit color display compatible monitor (1280 X 1024 pixels, 32-bit color display recommended)</li><li>• USB port, Microsoft DirectX 9.0c or later</li></ul>



- Intelli-studio may not perform correctly on some computers, even when the computer meets the requirements.
- If your computer does not meet the requirements, videos may not play correctly or it may take longer to edit videos.
- Install DirectX 9.0c or above before you use the program.
- You must use Windows XP/Vista/7 or Mac OS 10.4 or later to connect the camera as a removable disk.





Using a self-assembled PC or a PC and OS that are not supported may void your warranty.

## Transferring files using Intelli-studio


Intelli-studio will start automatically when you connect the camera to your computer with the USB cable.

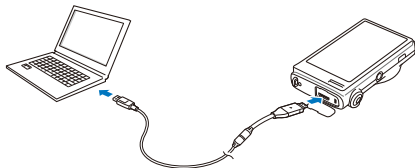


The battery will be charged while the camera is connected to a computer with the USB cable.

- 1 In Shooting or Playback mode, select **MENU** → .
- 2 Select  (twice) → **PC Software** → **On**.
- 3 Turn off the camera.
- 4 Connect the camera to your computer with the USB cable.



You must plug the end of the cable with the indicator light () into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



### 5 Turn on the camera.

- The computer recognizes the camera automatically.



If you set the USB option to **Select Mode**, select **Computer** from the pop-up window.

### 6 Select a folder on your computer to save new files.

- If your camera has no new files, the pop-up window for saving new files will not appear.

### 7 Select **Yes**.

- New files will be transferred to the computer.



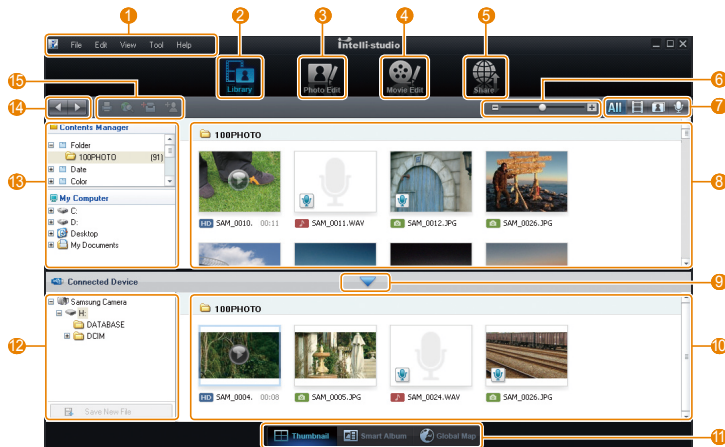
For Windows Vista, select **Run iStudio.exe** from the AutoPlay window.

### Using Intelli-studio

Intelli-studio is a built-in program that allows you to play back and edit files. You can also upload files to websites, such as Flickr or YouTube. For details, select **Help** → **Help** in the program.





- If you install Intelli-studio on your computer, the program will launch more quickly. To install the program, select **Tool** → **Install Intelli-studio on PC**.
- You cannot edit files directly on the camera. Transfer files to a folder on your computer before editing.
- You cannot copy files in your computer to the camera.
- Intelli-studio supports the following formats:
  - Videos: MP4 (Video: H.264, Audio: AAC), WMV (WMV 7/8/9), AVI (MJPEG)
  - Photos: JPG, GIF, BMP, PNG, TIFF



Icon	Description
1	Open menus
2	Display files in the selected folder
3	Change to the Photo edit mode
4	Change to the Video edit mode
5	Change to the Sharing mode (You can send files by email or upload files to websites, such as Flickr or YouTube.)
6	Enlarge or reduce the thumbnails in the list
7	Select a file type
8	View files of the selected folder on your computer
9	Show or hide files of the connected camera
10	View files of the selected folder on the camera
11	View files as thumbnails, in Smart Album, or on a map
12	Browse folders in the connected device
13	Browse folders in your computer
14	Move to the previous or next folder
15	Print files, view files on a map, store files in My Folder, or register faces

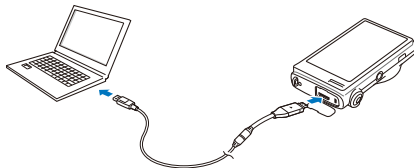
## Transferring files by connecting the camera as a removable disk

You can connect the camera to your computer as a removable disk.

- 1 In Shooting or Playback mode, select **MENU** → .
- 2 Select  (twice) → **PC Software** → **Off**.
- 3 Connect the camera to your computer with the USB cable.



You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



4 Turn on the camera.

- The computer recognizes the camera automatically.




If you set the USB option to **Select Mode**, select **Computer** from the pop-up window.

5 On your computer, select **My computer** → **Removable Disk** → **DCIM** → **100PHOTO**.

6 Select the files you want and drag or save them to your computer.

## Disconnecting the camera (for Windows XP)

The way to disconnect the USB cable for Windows Vista/7 is similar.

- 1 If the status lamp on your camera is blinking, wait until it stops.
- 2 Click  on the tool bar at the bottom right of your PC screen.



- 3 Click the pop-up message.
- 4 Remove the USB cable.



The camera may not be removed safely when Intelli-studio is running. End the program before disconnecting the camera.

# Transferring files to your computer (for Mac)

When you connect the camera to a Macintosh computer, the computer will recognize the device automatically. You can transfer files directly from the camera to the computer without installing any programs.

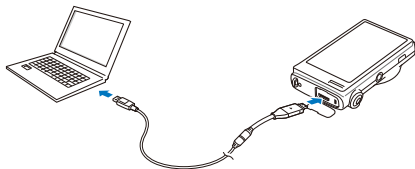


Mac OS 10.4 or later is supported.

- 1 Connect your camera to a Macintosh computer with the USB cable.



You must plug the end of the cable with the indicator light (▲) into your camera. If the cable is reversed, it may damage your files. The manufacturer is not responsible for any loss of data.



- 2 Turn on the camera.

- The computer recognizes the camera automatically and a removable disk icon will be displayed.





If you set the USB option to **Select Mode**, select **Computer** from the pop-up window.

- 3 Double-click the removable disk icon.
- 4 Transfer photos or videos to the computer.





# Printing photos with a photo printer (PictBridge)

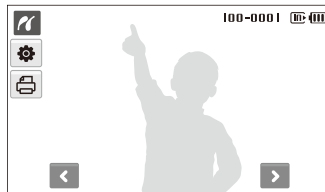
Print photos with a PictBridge-compatible printer by connecting your camera directly to the printer.

- 1 In Shooting or Playback mode, select **MENU** → .
- 2 Select  (twice) → **USB** → **Printer**.
- 3 With the printer on, connect your camera to the printer with the USB cable.



- 4 Turn on your camera.
  - The printer recognizes the camera automatically.


- 5 Select  to print.
  - Select  to set printing options. See "Configuring print settings" on page 93.



- 6 Select an option.

Option	Description
Current Photo	Print the currently selected photo. Skip to step 8.
Selected Photos	Print the photos you want.
All Photos	Print all photos. Skip to step 8.

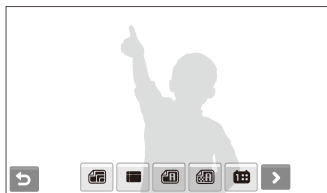
- 7 Select ◀ or ▶ to scroll to a photo to print.
- 8 Select ▲ or ▼ to set the number of copies and select **OK**.
  - If you selected to print the photos you want, repeat steps 7-8 for all photos to print.
- 9 Select **Yes** to confirm.
  - Printing starts. Select **Cancel** to cancel printing.





Option	Description
	<b>Date:</b> Set to print the date.
	<b>File Name:</b> Set to print the name of the file.
	<b>Reset:</b> Reset the print options.



Some options are not supported by some printers.

### Configuring print settings



Option	Description
	<b>Size:</b> Specify the size of the print.
	<b>Layout:</b> Create thumbnail prints.
	<b>Type:</b> Select the type of paper.
	<b>Quality:</b> Set the printing quality.

# Wireless network/Bluetooth

Learn to use several functions using wireless local area networks (WLANs) and the Bluetooth feature.

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# Connecting to a WLAN and configuring network settings

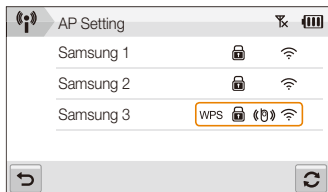
Learn to connect via an access point (AP) when you are in a range of a WLAN. You can also configure network settings and learn how to enter text.



This camera uses non-harmonised frequencies and is intended for use in all European countries.  
The WLAN can be operated indoors in the EU without restriction, but cannot be operated outdoors in France.

## Connecting to a WLAN automatically

- 1 In Shooting or Playback mode, select → .
- 2 Select **AP Setting**.
  - The camera will search for and display available AP devices.
- 3 Select an AP device.



Icon	Description
WPS	WPS AP
	Secured AP
	Ad hoc AP
	Signal strength

- The camera will connect to the WLAN.
- If the selected AP device supports the WPS profile, select **WPS** on the next screen and press the WPS button or enter a PIN on the AP device. You can configure the WPS setting to press the WPS button or enter a PIN on the AP device. (p. 99)
- If the selected AP device requires a password, continue with the next step.

#### 4 Select network profiles and options.

Option	Description
<b>Authentication</b>	Select a network authentication.
<b>Data Encryption</b>	Select an encryption type.

#### 5 Select the password input field.

#### 6 Enter a password and select **OK**.

- For information about entering text, refer to page 100.

#### 7 Select **OK**.

- The camera will connect to the WLAN.
- On the top line of the screen, you can check the network signal status.

Icon	Description
📶	Signal is found.
📶	No signal is found.

### Connecting to a WLAN manually

#### 1 In Shooting or Playback mode, select → .

#### 2 Select **AP Setting**.

- The camera will search for and display available AP devices.

#### 3 Select an AP device.

#### 4 Select **IP Setting** → **Manual**.

#### 5 Select the network profiles.

Option	Description
<b>IP</b>	Enter the static IP address.
<b>Subnet Mask</b>	Enter the subnet mask.
<b>Gateway</b>	Enter the gateway.
<b>DNS Server</b>	Enter the DNS address.

#### 6 Enter values and select **OK**.

#### 7 When you are finished, select **OK**.

- The camera will connect to the WLAN.

## Network connection tips

- Some AP devices will not allow your camera to connect to the network.
- If you are far from the AP device, it may take long to connect to the network.
- If there is any electronic equipment nearby that uses the same radio frequency (RF) signals, the camera may not connect to the AP device.
- If the AP device has a non-English name, it may not appear in the search list or the name may appear jumbled or incomplete.
- For network profiles and a password, contact your network administrator or network service provider.
- If the network requires any authentication from the service provider, you may not connect to it. Contact your network service provider.
- The number of characters and numbers allowed for the encryption key differs depending on the encryption type.
- A WLAN connection may not be possible depending on your surroundings.
- When searching for networks, you may be able to find a printer that supports the network. However, you cannot use the printer to connect to a network.
- The camera cannot connect to the network if it is connected to a TV with the A/V cable. Also, when the camera is connected to the network, you cannot view files on a TV screen even when connected with the A/V cable.
- When connecting to the network, you will be charged according to your contract with your network service provider.
- You can use only free WLANs with your camera. If you use free WLANs that require the user agreement and additional information when you connect to a web browser, some features may be limited when connecting to websites or sending email.
- Frequency ranges allow you to connect to the network will differ depending on the country.
- The WLAN feature of your camera must comply with radio transmission laws, so use of this feature may be restricted in some countries. We recommend that you use the WLAN feature in the country where you purchased the camera.
- For network profiles and a password, contact your network administrator or network service provider.
- Methods of configuring the network profiles may differ depending on the network environment.
- Do not access a network that you are not allowed to use.
- Use a fully charged battery while connecting to the network.
- When connecting to the network using Auto IP, make an autoip.txt file and copy it to the inserted memory card.

## Storing your information

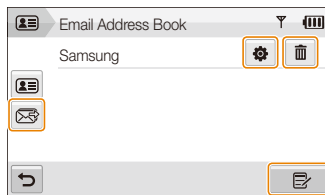
Store your name and email address to send emails or to find out your camera on another device.

- 1 In Shooting or Playback mode, select → .
- 2 Select **User Setting**.
- 3 Select the name input field and enter your name.
  - For information about entering text, refer to page 100.
- 4 When you are finished, select **OK**.
- 5 Select the email input field and enter your email address.
- 6 When you are finished, select **OK**.
- 7 Select **OK** to save your information.

## Storing email addresses

Store up to 10 email addresses in your camera. You can use them when you send your photos via email.



- 1 In Shooting or Playback mode, select → .
- 2 Select **Email Address**.



- Select to display the recent recipient email addresses.
  - Select to edit the email address.
  - Select to delete the email address.
- 3 Select .
  - 4 Enter a name and email address.
  - 5 When you are finished, select **OK**.




## Setting the file size to share

Set the file size you will share with other DLNA-authorised devices. You can select either the original size or **2M**.

- 1 In Shooting or Playback mode, select  → .
- 2 Select **DLNA -Image Size**.
- 3 Select a size.




## Configuring the WPS setting

Configure this setting to press a WPS button or enter a PIN when connecting to a WLAN with an AP device that supports the WPS profile.

- 1 In Shooting or Playback mode, select  → .
- 2 Select  → **WPS Type**.
- 3 Select **PBC** to press the WPS button or **PIN** to enter a PIN.

## Setting a password

Restrict sending emails and configuring network settings by setting a password.

- 1 In Shooting or Playback mode, select  → .
- 2 Select  → **Setting Password** → **On** → **Confirm**.
- 3 Enter a password (4 digits).
- 4 Enter the password (4 digits) again.



To reset a password, select **Reset** from the password input window. If you reset the password, your stored email addresses, recently sent email addresses, and all personal information will be deleted to protect user information.



## Changing the password

Change the password if necessary.

- 1 In Shooting or Playback mode, select → .
- 2 Select → **Change Password**.
- 3 Enter the current password (4 digits).
- 4 Enter a new password (4 digits).
- 5 Enter the new password (4 digits) again.

## Checking information

Check the Mac address and serial number of your camera to register it with the Samsung website.

- 1 In Shooting or Playback mode, select → .
- 2 Select → **Device Information**.

## Entering text

To enter text when storing your information or email addresses, select the appropriate letters, symbols, and numbers.



Icon	Description
◀ ▶	Move the cursor.
↑	Enter capital letters or small letters, and change symbols.
ABC	Enter letters.
Space	Enter a space.
←	Delete the last letter.
123	Enter numbers and symbols.
OK	Store the displayed text.





You can enter text only in English, regardless of the display language.

# Using photo or video sharing websites

Upload your photos or videos to file sharing websites (available websites will be displayed on your camera).

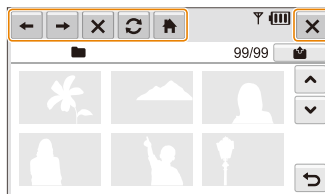
## Accessing a website

- 1 In Shooting or Playback mode, select  → .
- The camera automatically connects to the WLAN via the last connected AP device.
- If the camera has not connected to the WLAN, it automatically searches for available AP devices. (p. 95)
- 2 Select a website.
- 3 Enter your login ID and password, and select **Login**.






Create your login ID and password on a PC in advance.

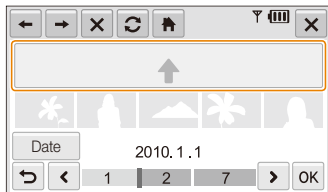
Icons on a website



Icon	Description
←	Previous page
→	Next page
×	Stop
↺	Refresh
🏠	Home
×	Close

## Uploading photos or videos


- 1 Select .
- 2 Select  or  to scroll through files.
- 3 Drag photos or videos to the selection area or select photos or videos, and select **OK**.





- Select **Date** to categorise the files. (p. 70)

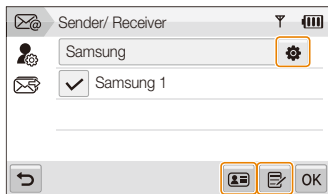
- 4 Enter a title and select an album, and then select .






- The maximum photo resolution you can upload is **2M**, and the longest video you can upload is 30 seconds at 320 X 240 resolution or the video recorded using **For Sharing**.
- If the selected photo resolution is higher than **2M**, it will be automatically resized to a lower resolution.
- When the total size of all photos selected is smaller than 10 MB, you can upload them to a website (up to 20 photos).
- Methods of uploading photos or videos may differ depending on the selected website.
- If you cannot access a website because of firewall or user authentication settings, contact your network administrator or network service provider.
- When you are not able to upload photos or videos due to server errors, select .
- Titles for photos or videos you are uploading could be the date they are captured.
- The speed of your internet connection may affect how quickly photos upload or web pages open.

# Sending photos via email

- 1 In Shooting or Playback mode, select  → .
  - The camera automatically connects to the WLAN via the last connected AP device.
  - If the camera has not connected to the WLAN, it automatically searches for available AP devices. (p. 95)
- 2 Enter email addresses for the sender and receiver.



- Select  to enter or modify the email address of the sender.
- Select  to retrieve the stored email addresses.
- Select  to enter an email address manually.

- 3 Select **OK**.
- 4 Select **Text Input** and enter your email text.
- 5 Select photos, or drag photos to the selection area and select **OK**.
  - The photos will be sent to the selected email addresses.
  - The **Transfer completed.** message will still appear, even when photos cannot be sent or be sent as spam due to an error with the recipient's email account.





- When the total size of all photos selected is smaller than 10 MB, you can send them via email (up to 20 photos).
- You can enter up to 10 recipients for each email.
- You may not be able to send an email due network connection or email account settings.
- The maximum photo resolution you can send is **2M** and if the selected photo resolution is higher than **2M**, it will be automatically resized to a lower resolution.
- If you cannot send an email because of firewall or user authentication settings, contact your network administrator or network service provider.
- When there are no photos in the camera memory, you cannot use this feature.

# Viewing photos or videos on the DLNA devices

The Digital Living Network Alliance (DLNA) is an international technology standard for sharing media files between networked devices in your home. With this technology, you can view your photos or videos on a widescreen TV or another device. You cannot send or receive voice memos.

## Viewing photos or videos on a TV screen

View your photos or videos on a TV that supports the DLNA-authorized Digital Media Player (DMP).

- 1 In Shooting or Playback mode, select  → .

  - The camera automatically connects to the WLAN via the last connected AP device.
  - If the camera has not connected to the WLAN, it automatically searches for the available AP devices. (p. 95)

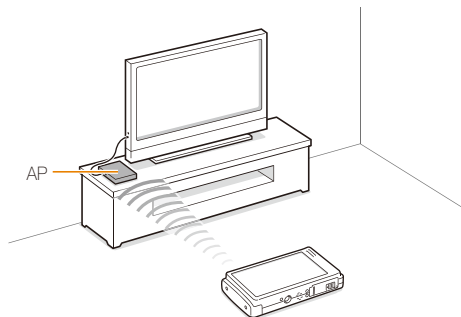
- 2 Select **Selected Files**.
  - To share all files, select **All Files** and skip to step 4.
- 3 Select photos or videos to share.



You can share up to 1000 photos or videos.

- 4 On the TV, search for the camera and browse the shared photos or videos.



- Your camera's name is what you entered in the user setting. (p. 98)
- For information about searching for the camera and browsing the photos or videos on the TV, refer to the TV user manual.





- On a TV screen, you can view only photos or videos captured with your camera.
- The distance between the camera and TV may be affected by the AP device.
- If the camera is connected to 2 TVs, playback may be slowed.
- The photos will be shared according to the size you set. (p. 99)  
The videos will be shared in their original sizes.
- You can use this feature only with a DLNA-authorized Digital Media Players (DMPs).
- Shared photos or videos will not be stored on the TV, but they can be stored according to the TV specifications.
- Transferring photos or videos to the TV may take some time depending on the network connection and the file size.
- If you power off the camera abnormally while viewing photos or videos on a TV (ex. removing battery), the TV considers the camera to still be connected.
- The order of photos or videos on the camera and TV could be different.
- According to the number of photos or videos you want to share, it may take some time to load your photos or videos and complete the initial set-up process.
- While viewing photos or videos on the TV, continuously using the TV remote or performing additional operations on the TV may prevent this feature from working properly.
- If you reorder or sort files on the camera while viewing them on a TV, you must repeat the initial set-up process to update the list of files on the TV.
- When there are no photos or videos in the camera memory, you cannot use this feature.

## Viewing photos or videos on another device (renderer)

- 1 In Shooting or Playback mode, select  → .
  - The camera automatically connects to the WLAN via the last connected AP device.
  - If the camera has not connected to the WLAN, it automatically searches for the available AP devices. (p. 95)
  - If the camera has connected to the WLAN, it automatically searches for and displays the available DLNA-enabled devices. However, searching for the devices may take some time.
- 2 Select a device (renderer) that will play the photos or videos.
- 3 Drag a photo or video to the selection area or select a photo or video.
  - The photos or videos will appear on the device's screen.
  - To view other photos or videos, drag a photo or video to the selection area one by one on your camera.





- When searching for DLNA-authorized devices on the network, the camera may not find all devices on the network.
- If you power off the device abnormally while viewing photos or videos on a device, the camera considers the device to still be connected.
- The photos will be shared according to the size you set. (p. 99)  
The videos will be shared in their original sizes.
- You can use this feature only with a DLNA-authorized renderer.
- The shared photos or videos will not be stored on the device, but they can be stored according to the device specifications.
- Transferring photos or videos to the device may take some time depending on the network connection and the file size.
- You can transfer files one by one.
- When there are no photos or videos in the camera memory, you cannot use this feature.
- On other devices (renderer), you can view only photos or videos captured with your camera.
- When you search for other devices, searching for devices may take some time depending on the network connection. In this case, try again.

# Sending or receiving photos or videos with a camera



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Learn to send or receive photos or videos to or from camera of the same model. You cannot send or receive voice memos.

## Sending photos or videos to another camera

- 1 In Shooting or Playback mode, select  → .
- 2 Select **Send**.
  - The camera generates a password and displays it on the screen while waiting for a connection with the receiving camera.
- 3 On the receiving camera, select the name of the sending camera.
  - The sending camera's name is what you entered in the user setting. (p. 98)
- 4 Enter the password (4 digits) on the receiving camera.
  - The selection area automatically appears on the sending camera.
- 5 Drag photos or videos to the selection area or select them.
  - The photos or videos will be sent to the receiving camera.

## Receiving photos or videos from another camera

- 1 In Shooting or Playback mode, select  → .
- 2 Select **Receive**.
  - On the sending camera, select **Send** and after some time, select **Receive**.
- 3 Select the name of the sending camera.
- 4 Enter the sending camera's password and select **OK**.
  - The password will appear on the screen of the sending camera.
  - When the sending camera transmits photos or videos, they will appear on the receiving camera.



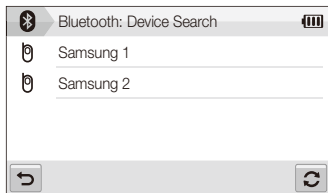


- This feature uses an ad hoc wireless network.
- You cannot send and receive files at the same time. Once you have received files, end the connection with the camera and then reconnect to the camera to send photos or videos.
- The distance between two cameras may be affected by the efficiency of the ad hoc wireless network.
- If a camera turns off abnormally while sending or receiving photos or videos, the other camera considers the camera to still be connected. Cameras will be disconnected after some time.
- It may take some time to send or receive photos or videos depending on the file size and the ad hoc network connection.
- You can transfer files one by one.
- If you fail to receive or send a photo or videos, it will not be saved on the receiving camera.
- When there are no photos in the camera memory, you cannot use this feature.
- You can send and receive photos or videos taken with your camera or other camera only.
- If you select the original size in the DLNA-image size setting, you can send or receive the photos without transformation. However, if you select **2M** and the selected photo resolution is higher than **2M**, it will be automatically resized to a lower resolution. (p. 99)
- You can send or receive videos smaller than 35 MB only.

# Sending photos via Bluetooth

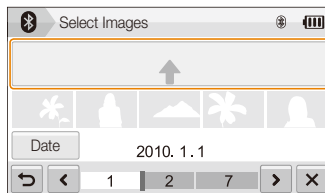
Bluetooth is a wireless protocol for exchanging data over short distances. With Bluetooth, you can send photos to other mobile phones or PDAs. However, you cannot receive photos from other devices and you cannot send videos or voice memos.

- 1 In Shooting or Playback mode, select → .
  - The Bluetooth feature turns on. However, other Bluetooth-enabled devices cannot find your camera.
- 2 To search for and display Bluetooth-enabled devices, select **Yes**.
  - If you have searched for the Bluetooth-enabled devices, a list of Bluetooth-enabled devices appears. Select to search again.
- 3 Select a Bluetooth-enabled device.



- Select to view other devices.
- When searching for Bluetooth-enabled devices, you may be able to find other devices. However, you can send photos only to mobile phones or PDAs.

- 4 Enter a password (4–6 digits) and select **OK**.
  - If you enter a 6-digit password, you do not need to select **OK**.
- 5 Enter the same password on the device.
- 6 Drag photos to the selection area or select photos.



- The photos will be sent to the selected device.
- The photo size will be changed to 640 X 480 (VGA).

## 7 After sending is complete, select **X** → **Yes**.

- The camera and the device are disconnected and the Bluetooth feature turns off.



- The camera may not search for a specific Bluetooth-enabled device and send a photo to it depending on the device type.
- If the other device does not have enough memory, the photo may not be transferred. Delete some photos to free up some memory and try sending again.
- You cannot connect to several Bluetooth-enabled devices at one time.
- Place the camera and the Bluetooth-enabled device reasonably close to one another.
- The camera may cause interference with other devices that use or produce radio waves.
- When there are no photos in the camera memory, you cannot use this feature.
- You can send photos only to Bluetooth-enabled phones or PDAs that support the Object Push Profile (OPP).
- Some phones or PDAs may not display photos you sent via Bluetooth.

# Appendixes

Refer to settings, error messages, specifications, and maintenance tips.

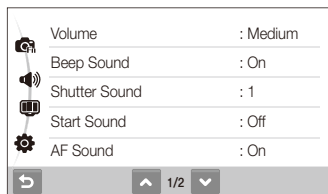
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# Settings menu

Learn about various options to configure your camera's settings.

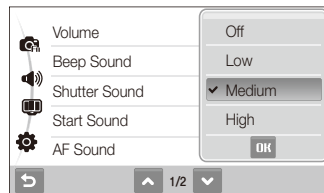
## Accessing the settings menu

- 1 In Shooting or Playback mode, select **MENU**.
- 2 Select a menu.



Icon	Description
	<b>Sound settings:</b> Set various camera sounds and volume. (p. 113)
	<b>Display settings:</b> Customize the display settings, such as brightness. (p. 113)
	<b>Camera settings:</b> Change the settings for the camera system, such as memory format, default file name, and USB mode. (p. 114)

- 3 Select an option and save your settings.



- 4 Select  to return to the previous screen.



## Sound settings

\* Default

Item	Description
Volume	Adjust the volume of any sound. ( <b>Off</b> , <b>Low</b> , <b>Medium*</b> , <b>High</b> )
Beep Sound	Select a sound to be emitted when touching on the screen or switching modes. ( <b>Off</b> , <b>On*</b> )
Shutter Sound	Select a sound to be emitted when pressing the shutter button. ( <b>Off</b> , <b>1*</b> , <b>2</b> , <b>3</b> )
Start Sound	Select a sound to be emitted when turning on your camera. ( <b>Off*</b> , <b>1</b> , <b>2</b> , <b>3</b> )
AF Sound	Set a sound to be emitted when half-pressing the shutter button. ( <b>Off</b> , <b>On*</b> )
Self-Portrait	Set to emit a sound when the camera detects your face. ( <b>Off</b> , <b>On*</b> )

## Display settings

\* Default


Item	Description
Function Description	Display a brief description of an option or menu. ( <b>Off</b> , <b>On*</b> )
Start Image	<p>Set a start image to display when the camera turns on.</p> <ul style="list-style-type: none"> <li>• <b>Off*</b>: Display no start image.</li> <li>• <b>Logo</b>: Display a default image stored in the internal memory.</li> <li>• <b>User Image</b>: Display the image you want. (p. 78)</li> </ul>  <ul style="list-style-type: none"> <li>• Only one start image will be saved in the internal memory.</li> <li>• If you select a new photo as a start image or reset your camera, the current image will be deleted.</li> </ul>
Grid Line	Select a type of the grid lines that help you to compose a scene. ( <b>2 X 2*</b> , <b>3 X 3</b> , <b>+</b> , <b>X</b> )
Display Brightness	<p>Adjust the brightness of the screen. (<b>Auto*</b>, <b>Dark</b>, <b>Normal</b>, <b>Bright</b>)</p>  <b>Normal</b> is fixed in Playback mode even if <b>Auto</b> is selected.

\* Default


Item	Description
Quick View	Set the duration for reviewing a captured image before returning to Shooting mode. (Off, 0.5 sec*, 1 sec, 3 sec)
Power Save	If you perform no operations for 30 seconds, the camera automatically switches to Power save mode (press any button to deactivate the Power save mode). (Off*, On)

## Camera settings





\* Default

Item	Description
Format	Format the internal memory and the memory card (all files-including the protected files-will be deleted). (No, Yes)  If you use a memory card used with cameras from different manufacturers or a memory card reader, or one formatted on a computer, your camera may read the card incorrectly. Format the card before using it.
Reset	Reset menus and shooting options (date and time, language, and video output settings will not be reset). (No, Yes)


\* Default

Item	Description
Language	Select a language for the display text.
Date & Time	Set the date and time and select a date format. (Off*, yyyy/mm/dd, mm/dd/yyyy, dd/mm/yyyy)
Time Zone	Select a region and set the daylight-saving time (DST).
File No.	Specify how to name files. <ul style="list-style-type: none"> <li>• <b>Reset:</b> Set the file number to start from 0001 when inserting a new memory card, formatting a memory card, or deleting all files.</li> <li>• <b>Series*:</b> Set the file number to follow the previous file number when inserting a new memory card, formatting a memory card, or deleting all files.</li> </ul>  <ul style="list-style-type: none"> <li>• The default name of the first folder is 100PHOTO and the default name of the first file is SAM_0001.</li> <li>• The file number increases one by one from SAM_0001 to SAM_9999.</li> <li>• The folder number increases one by one from 100PHOTO to 999PHOTO.</li> <li>• The maximum number of files that can be stored in one folder is 9999.</li> <li>• The camera defines file names according to the Digital rule for Camera File system (DCF) standard. If you change the names of files intentionally, the camera may not play back the files.</li> </ul>

\* Default

Item	Description
Imprint	<p>Set whether to display the date and time on your photos when printing. (<b>Off</b>*, <b>Date</b>, <b>Date &amp; Time</b>)</p>  <ul style="list-style-type: none"> <li>The date and time will be displayed on the bottom-right corner of the photo in yellow.</li> <li>The date and time may not be printed on some printer models.</li> <li>If you select  <b>Text</b> in the  mode, the date and time will not be displayed.</li> </ul>
Auto Power Off	<p>Set the camera to automatically turn off when you are not using it. (<b>Off</b>, <b>1 min</b>, <b>3 min</b>*, <b>5 min</b>, <b>10 min</b>)</p>  <ul style="list-style-type: none"> <li>Your settings will not change after replacing the battery.</li> <li>The camera will not automatically turn off when:             <ul style="list-style-type: none"> <li>it is connected to a computer or printer</li> <li>you are playing a slide show or videos</li> <li>you are recording a voice memo</li> </ul> </li> </ul>
AF Lamp	<p>Set an assistant light to help you focus in dark places. (<b>Off</b>, <b>On</b>*)</p>
Anynet+ (HDMI-CEC)	<p>Set to control the camera connected to a Samsung HDTV that supports Anynet+(CEC) with the TV remote control.</p> <ul style="list-style-type: none"> <li><b>Off</b>*: View files without using an HDTV remote control.</li> <li><b>On</b>: Control the camera with an HDTV remote control.</li> </ul>

\* Default

Item	Description
HDMI Size	<p>Select the resolution of photos when playing back files on an HDTV with the HDMI cable. (NTSC: <b>1080i</b>*, <b>720p</b>, <b>480p</b>/ PAL: <b>1080i</b>*, <b>720p</b>, <b>576p</b>)</p>  <ul style="list-style-type: none"> <li>If the HDTV does not support the selected resolution, the HDTV automatically selects the next lower resolution.</li> <li>If you select <b>480p</b> or <b>576p</b>, the playback menus and Smart Album will not be available when connected to a TV.</li> </ul>
Video Out	<p>Set the video signal output according to your region.</p> <ul style="list-style-type: none"> <li><b>NTSC</b>*: USA, Canada, Japan, Korea, Taiwan, Mexico</li> <li><b>PAL</b> (supports only BDGH!): Australia, Austria, Belgium, China, Denmark, England, Finland, Germany, Italy, Kuwait, Malaysia, Netherlands, New Zealand, Norway, Singapore, Spain, Sweden, Switzerland, Thailand</li> </ul>



\* Default

Item	Description
USB	<p>Set the function to use via a USB connection with a computer or printer.</p> <ul style="list-style-type: none"><li>• <b>Computer*</b>: Connect your camera to a computer for transferring files.</li><li>• <b>Printer</b>: Connect your camera to a printer for printing files.</li><li>• <b>Select Mode</b>: Select a USB mode when you connect your camera to another device.</li></ul>
PC Software	<p>Set Intelli-studio to start automatically when you connect your camera to your computer. (<b>Off</b>, <b>On*</b>)</p>
Calibration	<p>Calibrate the screen so that your camera will properly recognize the input.</p>

# Error messages

When the following error messages appear, try these remedies.

Error message	Suggested remedies
<b>Card Error</b>	<ul style="list-style-type: none"><li>• Turn off your camera and then turn it on again.</li><li>• Remove your memory card and insert it again.</li><li>• Format your memory card. (p. 114)</li></ul>
<b>Card not supported.</b>	The inserted memory card is not available with your camera. Insert a microSD™ memory card.
<b>Connection failed.</b>	<ul style="list-style-type: none"><li>• The camera cannot connect to the network using the selected access point. Select another and try again.</li><li>• The camera fails to connect to another Bluetooth-enabled device or a camera of the same model. Try connecting again.</li></ul>
<b>DCF Full Error</b>	File names do not match the DCF standard. Transfer the files on the memory card to your computer and format the card. (p. 114)
<b>Device disconnected.</b>	Connect to a device again.
<b>File Error</b>	Delete the damaged file or contact a service center.
<b>Initialization failed.</b>	Turn on DLNA-authorized devices on the network.
<b>Invalid password.</b>	The password for transferring files to another Bluetooth-enabled device or a camera of the same model is wrong. Enter the correct password again.

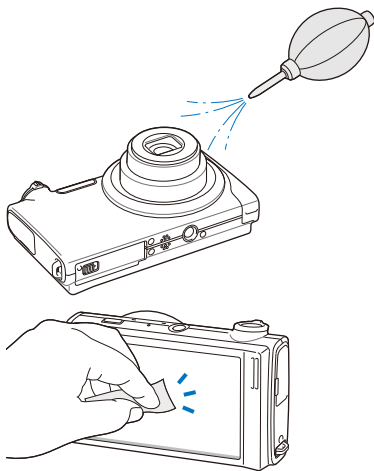
Error message	Suggested remedies
<b>Low Battery</b>	Insert a charged battery or recharge the battery.
<b>Memory Full</b>	Delete unnecessary files or insert a new memory card.
<b>No Image File</b>	Take photos or insert a memory card that has some photos.
<b>Photo reception failed.</b>	The camera fails to receive a photo from the sending camera. Try sending again.
<b>Transfer failed.</b>	The camera fails to send a photo. Try sending again.

# Camera maintenance

## Cleaning your camera

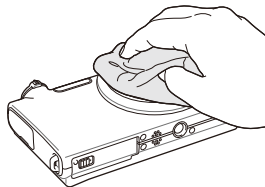
### Camera lens and touch screen

Use a blower brush to remove dust and wipe the lens gently with a soft cloth. If any dust remains, apply lens cleaning liquid to a piece of cleaning paper and wipe gently.



### Camera body

Wipe gently with a soft, dry cloth.



- Never use benzene, thinners, or alcohol to clean the device. These solutions can damage the camera or cause it to malfunction.
- Do not press on the lens cover or use a blower brush on the lens cover.















## About memory cards

### Memory cards you can use

You can use microSD™ (Secure Digital) memory cards.

### Memory card capacity

The memory capacity may differ depending on shooting scenes or shooting conditions. These capacities are based on a 1 GB microSD™ card:

	Size	Super Fine	Fine	Normal	60 FPS	30 FPS	15 FPS
P h o t o s		122	240	353	-	-	-
		142	278	409	-	-	-
		160	312	454	-	-	-
		206	401	588	-	-	-
		211	409	594	-	-	-
		335	637	908	-	-	-
		510	936	1,314	-	-	-
		762	1,373	1,931	-	-	-
		1,626	2,575	3,090	-	-	-
* V i d e o s		-	-	-	-	Approx. 13' 30"	Approx. 23' 36"
		-	-	-	-	Approx. 15' 20"	Approx. 32' 33"
		-	-	-	-	Approx. 37' 50"	Approx. 67' 30"
		-	-	-	Approx. 79' 13"	Approx. 138' 19"	Approx. 237' 41"
		-	-	-	-	Approx. 138' 19"	-

\* The recordable time may vary if you use the zoom.

Several videos were recorded in succession to determine the total recording time.


## About the battery

Use only Samsung-approved batteries.

### Battery specifications

Mode	SLB-11A
Type	Lithium-ion battery
Cell capacity	1130 mAh
Voltage	3.8 V
Charging time (when the camera is switched off)	Approx. 190 min

### Battery life

Average time / Number of photos		Test conditions (when the battery is fully charged)
<b>Photos</b>	Approx. 120 min/ Approx. 240 photos	<p>This is measured under the following conditions: in the  mode, 14M resolution, Fine quality, OIS on.</p> <ol style="list-style-type: none"> <li>1. Set the flash option to <b>Fill in</b>, take a single shot, and zoom in or out.</li> <li>2. Set the flash option to <b>Off</b>, take a single shot, and zoom in or out.</li> <li>3. Perform steps 1 and 2 for 30 seconds and repeat for 5 minutes. Then turn off the camera for 1 minute.</li> <li>4. Repeat steps 1 to 3.</li> </ol>
<b>Videos</b>	Approx. 80 min	Record videos at 1280 X 720 HQ resolution and 30 fps.

- The figures above are measured by Samsung's standards and may differ depending on actual usage.
- Several videos were recorded in succession to determine the total recording time.

#### Notes about charging the battery

- If the indicator light is off, make sure that the battery is inserted correctly.
- Turn off your camera when charging.
- Turn on your camera after charging the battery for more than 10 minutes.
- Using the flash or recording videos depletes the battery quickly. Charge the battery until the indicator light turns green.
- If the indicator light blinks in orange or does not illuminate, reconnect the cable, or remove the battery and insert it again.
- If you charge the battery when the cable is overheated or the temperature is too high, the indicator light may turn orange. Charging will start when the battery cools down.

#### Notes about charging with a computer connected

- Use only the provided USB cable.
- The battery may not be charged when:
  - you use a USB hub
  - other USB devices are connected to your computer
  - you connect the cable to the port on the front side of your computer
  - the USB port of your computer does not support the power output standard (5 V, 500 mA)



**Personal injury or death can occur if the battery is handled carelessly or improperly. For your safety, follow these instructions for proper battery handling:**

- The battery can ignite or explode if not handled properly. If you notice any deformities, cracks, or other abnormalities in the battery, immediately discontinue use of the battery and contact your manufacturer.
- Use only authentic, manufacturer-recommended battery chargers and adapters and charge the battery only by the method described in this user manual.
- Do not place the battery near heating devices or expose to excessively warm environments, such as the inside of an enclosed car in the summertime.
- Do not place the battery in a microwave oven.
- Avoid storing or using the battery in hot, humid places, such as spas or shower enclosures.
- Do not rest the device on flammable surfaces, such as bedding, carpets, or electric blankets for a prolonged period.
- When the device is switched on, do not leave it in any confined space for a prolonged period.
- Do not allow battery terminals to come in contact with metallic objects, such as necklaces, coins, keys, or watches.
- Use only authentic, manufacturer-recommended, Lithium-ion replacement batteries.

- Do not disassemble or puncture the battery with any sharp object.
- Avoid exposing the battery to high pressure or crushing forces.
- Avoid exposing the battery to major impacts, such as dropping it from high places.
- Do not expose the battery to temperatures of 60° C (140° F) or above.
- Do not allow the battery to come in contact with moisture or liquids.
- Battery shall not be exposed to excessive heat such as sunshine, fire or the like.

**Disposal guidelines**

- Dispose of the battery with care.
- Do not dispose of the battery in a fire.
- Disposal regulations may differ by country or region. Dispose of the battery in accordance with all local and federal regulations.





**Guidelines for charging the battery**

Charge the battery only by the method described in this user manual. The battery can ignite or explode if not charged properly.

# Before contacting a service center

If you are having trouble with your camera, try these troubleshooting procedures before contacting a service center. If you have attempted the troubleshooting solution and are still having problems with your device, contact your local dealer or service center.

Situation	Suggested remedies
Cannot turn on the camera	<ul style="list-style-type: none"> <li>Make sure that the battery is inserted.</li> <li>Make sure that the battery is inserted correctly.</li> <li>Charge the battery.</li> </ul>
The power turns off suddenly	<ul style="list-style-type: none"> <li>Charge the battery.</li> <li>Your camera may be in Power save mode. (p. 114)</li> <li>The camera may turn off to prevent the memory card from being damaged due to an impact. Turn on your camera again.</li> </ul>
The camera is losing battery power quickly	<ul style="list-style-type: none"> <li>The battery may lose power more quickly in low temperatures (below 0° C). Keep the battery warm by putting it into your pocket.</li> <li>Using the flash or recording videos depletes the battery quickly. Recharge if needed.</li> <li>Batteries are consumable parts that must be replaced over time. Get a new battery if the battery life is diminishing quickly.</li> </ul>

Situation	Suggested remedies
Cannot take photos	<ul style="list-style-type: none"> <li>There is no space on the memory card. Delete unnecessary files or insert a new card.</li> <li>Format the memory card. (p. 114)</li> <li>The memory card is defective. Get a new memory card.</li> <li>Make sure that the camera is switched on.</li> <li>Charge the battery.</li> <li>Make sure that the battery is inserted correctly.</li> </ul>
The camera freezes	Remove the battery and insert it again.
The flash does not work	<ul style="list-style-type: none"> <li>The flash option may be set to <b>Off</b>. (p. 47)</li> <li>You cannot use the flash in the , , , or some  modes.</li> </ul>
The flash fires unexpectedly	The flash may fire due to static electricity. This is not a malfunction of the camera.
The date and time are incorrect	Set the date and time in the display settings menu. (p. 114)
The touch screen or buttons do not work	Remove the battery and insert it again.



Situation	Suggested remedies
<b>The camera screen works poorly</b>	If you use your camera at very low temperatures, it may cause the camera screen to malfunction or discolor. For better performance of your camera screen, use your camera in moderate temperatures.
<b>The memory card has an error</b>	The memory card has not been reset. Format the card. (p. 114)
<b>Cannot play back files</b>	If you change the name of a file, your camera may not play the file (the name of the file should meet the DCF standard). If you encounter this situation, play back files on your computer.
<b>The photo is blurry</b>	<ul style="list-style-type: none"> <li>• Make sure that the focus option you set is suitable for close-up shots. (p. 49)</li> <li>• Make sure that the lens is clean. If not, clean the lens. (p. 118)</li> <li>• Make sure that the subject is within range of the flash. (p. 126)</li> </ul>
<b>The colors in the photo do not match the actual scene</b>	An incorrect white balance can create unrealistic color. Select the proper white balance option to suit the light source. (p. 60)

Situation	Suggested remedies
<b>The photo is too bright</b>	<ul style="list-style-type: none"> <li>• Turn off the flash. (p. 47)</li> <li>• Your photo is overexposed. Adjust the exposure value. (p. 57)</li> </ul>
<b>The photo is too dark</b>	<p>Your photo is underexposed.</p> <ul style="list-style-type: none"> <li>• Turn on the flash. (p. 47)</li> <li>• Adjust the ISO speed. (p. 48)</li> <li>• Adjust the exposure value. (p. 57)</li> </ul>
<b>The TV does not display your photos</b>	<ul style="list-style-type: none"> <li>• Make sure that the camera is correctly connected to the external monitor with the A/V cable.</li> <li>• Make sure that your memory card contains photos.</li> </ul>
<b>Your computer does not recognize your camera</b>	<ul style="list-style-type: none"> <li>• Make sure that the USB cable is connected correctly.</li> <li>• Make sure that your camera is switched on.</li> <li>• Make sure that you are using a supported operating system.</li> </ul>
<b>Your computer disconnects the camera while transferring files</b>	The file transmission may be interrupted by static electricity. Disconnect the USB cable and connect it again.

Situation	Suggested remedies
Your camera cannot play videos	<ul style="list-style-type: none"> <li>• You can play videos only with the Intelli-studio program. Install the program on your computer. (p. 88)</li> <li>• Make sure that the USB cable is connected correctly.</li> </ul>
Intelli-studio is not functioning properly	<ul style="list-style-type: none"> <li>• End Intelli-studio and restart the program.</li> <li>• You cannot use Intelli-studio on Macintosh computers.</li> <li>• Make sure that the <b>PC Software</b> is set to <b>On</b> in the settings menu. (p. 116)</li> <li>• Depending on your computer's specification and environments, the program may not launch automatically. In this case, click <b>Start → My Computer → Intelli-studio → iStudio.exe</b> on your computer.</li> </ul>

# Camera specifications










Image sensor			
Type	1/2.3" (Approx. 7.76 mm) CCD		
Effective pixels	Approx. 14.2 mega-pixels		
Total pixels	Approx. 14.5 mega-pixels		
Lens			
Focal length	Schneider-KREUZNACH lens f = 5.6 - 39.2 mm (35 mm film equivalent: 31 - 217 mm)		
F-stop range	F3.3 (W) - F5.5 (T)		
Digital zoom	<ul style="list-style-type: none"><li>Still image mode: 1.0X - 7.0X</li><li>Play mode: 1.0X - 13.5X (depending on image size)</li></ul>		
Display			
Type	WVGA AMOLED		
Feature	3.7" (9.4 cm) Wide Full Touch Screen Panel		
Focusing			
Type	TTL auto focus (Multi AF, Center AF, Face Recognition AF, Face Detection AF, Smart Touch AF, One Touch Shooting)		
Range		Wide (W)	Tele (T)
	Normal	80 cm - infinity	150 cm - infinity
	Macro	5 cm - 80 cm	70 cm - 150 cm
	Auto Macro	5 cm - infinity	70 cm - infinity

Shutter speed	
<ul style="list-style-type: none"> <li>Auto: 1/8 - 1/2,000 sec.</li> <li>Program: 1 - 1/2,000 sec.</li> <li>Night: 8 - 1/2,000 sec.</li> <li>Fireworks: 2 sec.</li> </ul>	
Exposure	
Control	Program AE
Metering	Multi, Spot, Center-weighted
Compensation	±2EV (1/3EV steps)
ISO equivalent	Auto, 80, 100, 200, 400, 800, 1600, 3200
Flash	
Mode	Off, Auto, Red-eye, Fill in, Slow Sync, Red-eye Fix
Range	<ul style="list-style-type: none"> <li>Wide: 0.3 m - 3.2 m (ISO Auto)</li> <li>Tele: 0.5 m - 1.9 m (ISO Auto)</li> </ul>
Recharging time	Approx. 4 sec.
Shake reduction	
DUAL IS [Optical Image Stabilization (OIS) + Digital Image Stabilization (DIS)]	

Effect	
Shooting mode	<ul style="list-style-type: none"> <li>• Photo Style Selector: Normal, Soft, Vivid, Forest, Retro, Cool, Calm, Classic, Negative, Sketch, Defog, Custom RGB</li> <li>• Smart Filter: Normal, Miniature, Vignetting, Fish-eye 1, Fish-eye 2</li> <li>• Image Adjust: Sharpness, Contrast, Saturation</li> </ul>
White Balance	
Auto WB, Daylight, Cloudy, Fluorescent_H, Fluorescent_L, Tungsten, Custom Set	
Date Imprinting	
Date & Time, Date, Off	
Shooting	
Photos	<ul style="list-style-type: none"> <li>• Modes: Smart Auto (Portrait, Night Portrait, Backlight Portrait, Backlight, Landscape, White, Motion, Tripod, Night, Macro, Macro Text, Blue Sky, Sunset Sky, Natural Green, Natural Portrait, Macro Color, Fireworks), Auto, Program, DUAL IS, Scene (Night, Portrait, Children, Landscape, Text, Close Up, Sunset, Dawn, Backlight, Fireworks, Beach &amp; Snow, Frame Guide, Beauty Shot)</li> <li>• Drive: Single, Continuous, Motion Capture, AEB</li> <li>• Timer: 10 Sec, 2 Sec, Double, Motion Timer</li> </ul>

Videos	<ul style="list-style-type: none"> <li>• Modes: Smart Scene Detection (Landscape, Blue Sky, Natural Green, Sunset Sky), Movie</li> <li>• Format: H.264 (Max recording time: 20 min)</li> <li>• Size: 1280 X 720 HQ (30 FPS, 15 FPS), 1280 X 720 (30 FPS, 15 FPS), 640 X 480 (30 FPS, 15 FPS), 320 X 240 (60 FPS, 30 FPS, 15 FPS), 320 X 240 For Sharing (30 FPS)</li> <li>• Frame Rate: 60 FPS, 30 FPS, 15 FPS</li> <li>• Effect: Photo Style Selector, White Balance, Smart Filter</li> <li>• Voice: Off, On, Zoom Mute</li> <li>• Video editing (embedded): Pause during recording, Still image capture, Time trimming</li> </ul>
Playback	
Type	Single image, Thumbnails, Multi slide show with music and effects, Movie clip, Smart Album*
Edit	* Smart Album category: Type, Date, Color, Week, Face, Favorite Resize, Rotate, Photo Style Selector, Image Adjust, Smart Filter, Special Effect, Face Effect

Effect	<ul style="list-style-type: none"> <li>• Photo Style Selector: Normal, Soft, Vivid, Forest, Retro, Cool, Calm, Classic, Negative, Sketch, Defog, Custom RGB</li> <li>• Image Adjust: ACB, Brightness, Contrast, Saturation</li> <li>• Smart Filter: Normal, Miniature, Vignetting, Fish-eye 1, Fish-eye 2</li> <li>• Special Effect: Color Filter, Elegant, Add Noise</li> <li>• Face Effect: Face Retouch, Red-eye Fix</li> </ul>
<b>Voice recording</b>	
<ul style="list-style-type: none"> <li>• Voice Recording (Max. 10 hours)</li> <li>• Voice Memo in a photo (Max. 10 sec.)</li> </ul>	
<b>Storage</b>	
Media	<ul style="list-style-type: none"> <li>• Internal memory: Approx. 13 MB</li> <li>• External memory (Optional): microSD™ card (up to 4 GB guaranteed)</li> </ul> <p>Internal memory capacity may not match these specifications.</p>
File format	<ul style="list-style-type: none"> <li>• Photo: JPEG (DCF), EXIF 2.21, DPOF 1.1, PictBridge 1.0</li> <li>• Video: H.264 (MPEG-4.AVC)</li> <li>• Audio: WAV</li> </ul>

Image size	For 1GB microSD™				
		Super Fine	Fine	Normal	
		4320 X 3240	122	240	353
		4000 X 3000	142	278	409
		3984 X 2656	160	312	454
		3840 X 2160	206	401	588
		3264 X 2448	211	409	594
		2560 X 1920	335	637	908
		2048 X 1536	510	936	1,314
		1920 X 1080	762	1,373	1,931
	1024 X 768	1,626	2,575	3,090	
These figures are measured under Samsung's standard conditions and may vary depending on shooting conditions and camera settings.					
Wireless network					
Wi-Fi	IEEE 802.11 b/g				
DLNA	Version: 1.5				
Bluetooth	<ul style="list-style-type: none"><li>• Version: 2.0</li><li>• QD ID: B016336</li></ul>				

### Interface

Digital output connector	USB 2.0
Audio output	Mono (Internal speaker), Stereo (Microphone)
Video output	<ul style="list-style-type: none"><li>• A/V: NTSC, PAL (selectable)</li><li>• HDMI 1.4: NTSC, PAL (selectable)</li></ul>
DC power input connector	20 pin, 4.4V

### Power source

Rechargeable battery	Lithium-ion battery (SLB-11A, 1130 mAh)
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The power source may differ depending on your region.

### Dimensions (W x H x D)

103.8 x 58.3 x 19.6 mm

### Weight

161.1 g (without battery and memory card)

### Operating temperature

0 - 40° C

### Operating humidity

5 - 85 %

### Software

Intelli-studio

Specifications are subject to change without prior notice.

# FCC notice



FCC ID:A3LCL80

## Caution:

Any changes or modifications in construction of this device which are not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

## NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorientate, or relocate, the receiving antenna.
- Increase the distance between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio / TV technician for help.

## RF exposure statements:

This device is for handheld operation only. The antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

## • Declaration of Conformity

Trade Name	: Samsung Electronics America, Inc.
Model No.	: Samsung CL80
Responsible Party	: Samsung Electronics America, Inc.
Address	: 105 Challenger Road Ridgefield Park NJ
Telephone No.	: 1-800-SAMSUNG (726-7864)

This device complies with Part 15 of the FCC Rules.

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.



## Samsung Eco-mark

It is Samsung's own symbol mark is used to effectively communicate Samsung's environmental friendly product activities to the consumers. The mark represents Samsung's continuous effort on development of environmental conscious products.

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Please refer to the warranty that came with your product or visit our website <http://www.samsung.com/> for after-sales service or inquiries.

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